

SIEMENS

SIREMOBIL Iso-C 3D

SP

Installation Instructions

3D Reconstruction

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English

Doc. Gen. Date: 08.04

Print No.: SPR2-230.814.01.05.02

Replaces: SPR2-230.814.01.04.02

Chapter	Page	Revision
all	all	05

Document revision level

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1	General	1 - 1
	Notes and symbols	1 - 1
	Safety information	1 - 2
	Measuring the protective conductor resistance	1 - 2
	Tools, measuring equipment and auxiliary devices	1 - 4
	Check list prior to installing the 3D option	1 - 5
	Actions required prior to installing the 3D option	1 - 5
2	Actions up to serial number 1408	2 - 1
	Cover of the X-ray unit.	2 - 1
	Cover of the horizontal carriage	2 - 1
	Cover of the cable module.	2 - 2
	Drilling and threading holes at the cable module	2 - 2
	Drilling and threading holes for installing the limit switches at the cable module	2 - 3
	Cabling, basic unit.	2 - 4
	Energy chain	2 - 5
	Upgrade cable set, item number 71 39 996	2 - 6
	Emergency stop relay	2 - 9
	"Emergency stop circuit 71 39 988" package	2 - 10
	Cable no. 1	2 - 10
	Cable no. 2	2 - 10
	Cable No. 3 (Fig. 25)	2 - 11
	Cable No. 4 (Fig. 26)	2 - 11
	Orbital drive	2 - 12
	Centering disk, item no. 71 40 580	2 - 14
	Washer, item no. Nr. 71 40 614	2 - 14
3	Actions beginning with serial number 1409	3 - 1
	Covers.	3 - 1
	Cover of the X-ray unit.	3 - 1
	Cover of the horizontal carriage	3 - 1
	Cover of the cable module.	3 - 1
	Centering disk, item no. 71 40 580	3 - 1
4	Kapitelüberschrift hier eintragen	4 - 1
	C-arm	4 - 1
	Limit switches	4 - 3
	Setting the limit switches	4 - 3
	Installing the system electronics for 3D reconstruction 71 39 921	4 - 4
	Cable no. 3, item number n.a.	4 - 6
	Cable no. 4, item number n.a.	4 - 6
	Cable no. 5A, item number n.a.	4 - 6
	Cable no. 5B, item number n.a.	4 - 6




	Page
Cable no. 2, item number n.a.	4 - 6
Cable no. 1, item number n.a.	4 - 6
Cable no. 6, item number n.a.	4 - 6
Orbital drive cable set, item no. 71 39 970	4 - 7
Cable no. 7, item number n.a. (Fig. 18).	4 - 8
Additional work with the LITHOSTAR MODULARIS option	4 - 11
Checking the existing configuration.	4 - 11
Installing the new LITHOSTAR MODULARIS interface	4 - 12
5 2. Part of activities independent of serial number	5 - 1
Orbital drive.	5 - 1
Coupling unit	5 - 2
Drive belt	5 - 4
Angulation measurement	5 - 5
Wiring for the orbital drive	5 - 6
6 3. Part of activities independent of serial number	6 - 1
Preparations on the monitor trolley	6 - 1
Replacing the monitor	6 - 2
SIMOMED HM	6 - 2
Cable no. 13, item number n.a.	6 - 4
TFT Displays	6 - 6
PC support	6 - 14
Holes for PC support	6 - 14
Keyboard tray	6 - 16
Rear panel of the monitor trolley	6 - 22
Installing the PC	6 - 22
Video switcher	6 - 23
Cut-off delay D210, item no. 71 40 071.	6 - 25
Cabling of the mouse and keyboard	6 - 27
Monitor cable, no. n.a., item number 30 65 844	6 - 27
Video cable, no. n.a., item number n.a.	6 - 27
Monitor cable, no. n.a., item number 30 65 844	6 - 28
Cable, no. 10, item number n.a.	6 - 29
Video Out cable, no. n.a., item number n.a.	6 - 29
Cable no. 14, item number n. a.	6 - 30
SCSI cable, no. .n.a., item number 30 66 180	6 - 31
Cable no. 11, item number n.a.,	6 - 32
Printer is available	6 - 32
No printer available	6 - 32
Cable no. 15, item number n.a.,	6 - 33
Cable no. 16, item number n.a.	6 - 34
Cables no. 8 and 9, item number n.a.	6 - 36
Attaching the video switcher	6 - 37
System manual drawer	6 - 37
Zipper hose	6 - 38
Cable no. 12, item number n.a.	6 - 39

	Page
External mouse	6 - 40
Dongle	6 - 40
Cabling.	6 - 40
Covers.	6 - 41
Attaching the PC covers	6 - 41
7 4. Part of activities independent of serial number	7 - 1
Checking the C-arm movements for SIREMOBIL Iso-C 3D.	7 - 1
Where to go from here.	7 - 1
8 Appendix	8 - 1
9 Changes to previous version	9 - 1

Page

Notes and symbols

Emphasized texts in technical documentation have the following meaning:

 DANGER	DANGER indicates when there is an immediate danger that leads to death or serious physical injury.
 WARNING	WARNING indicates a risk of danger that may lead to death or serious physical injury.
 CAUTION	CAUTION used with the safety alert symbol indicates a risk of danger that leads to slight or moderate physical injury and or damage to property.
NOTICE	NOTICE used without the safety alert symbol indicates a risk of danger that if disregarded leads or may lead to a potential situation which may result in an undesirable result or state other than death, physical injury or property damage.

Safety information



When performing the work steps and tests described herein, observe the product-specific safety information contained in the documents, as well as the general safety information TD00-000.860.01....

Measuring the protective conductor resistance

- After all work has been completed and all covers have been attached, perform the protective conductor measurement according to ARTD-002.731.17.
- The protective conductor resistance must not exceed 0.2 ohms.



Prior to performing the work, disconnect the power plug of the SIREMOBIL Iso-C.

- This document describes the individual steps required to install the 3D option in the installed base - in this case the SIREMOBIL Iso-C (Fig. 1).



Fig. 1 Overview of the SIREMOBIL Iso-C 3D

- There are two different mechanical installations.
- A larger number of mechanical changes are required up to serial number 1408 of SIREMOBIL Iso-C. These mechanical changes require separate instructions as well as a special drill.
- As from serial number 1409, the SIREMOBIL Iso-C systems have already been mechanically adapted in the factory for installing the 3D reconstruction.

Tools, measuring equipment and auxiliary devices

Standard installation tools

Protective ground tester 44 15 899 RV 090

Vacuum cleaner n.a.

Torque wrench 99 00 846 RE999

Calibration phantom Iso-C 3D with Navi
(replaces Calibration phantom Iso-C 3D 71 39 947) 75 51 620

Drill with right/left spiral (clockwise/counterclockwise) n.a.

Threader 96 60 093

Pliers for zipper hose 75 38 742

DMM Fluke 8060A 97 02 101 Y4290

Screw clamp, at least 100 mm long n.a.

Metal cutting saw n.a.

Up to serial number 1408 *

Drill by Fein 71 40 705

Crown bit 71 40 804

Drilling template n.a.

* This material will be provided by the trained CSE

Check list prior to installing the 3D option

Check the serial number	
For serial numbers up to 1408 , a specially trained CSE is required for installing the option (refer to the Field Service Strategy).		
For serial numbers beginning with 1409 the option may be installed by a CSE trained in SIREMOBIL Iso-C 3D.		
A room suitable for the installation is available.		
The tools to be provided by the R.U. are available.		
All auxiliary service tools to be provided by the R.U. are available.		

Actions required prior to installing the 3D option

Function check of the SIREMOBIL Iso-C in accordance with the operating manual		
Testing as part of the IQ quick test: - Chapter "checking the ADR characteristics" - Chapter "resolution" - Chapter "image interferences"		

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- Proceed as follows after the SIREMOBIL Iso-C has been moved to the respective room and the foot brake has been enabled.

Cover of the X-ray unit

- Remove the cover.
- Remove the protective conductor.

Cover of the horizontal carriage

If LITHOSTAR MODULARIS option is installed:

NOTE

After the installation of the SIREMOBIL Iso-C 3D upgrade, the external part of the docking plate must be reinstalled. Perform the installation and setting of the switches as described in the LITHOSTAR MODULARIS Service Instructions.

- Remove the cover (= 6 Allen screws) and pull connector M3.X1.
- Unscrew the protective conductor.
- Remove the brake assembly.
- The assembly previously removed has to be integrated into the new cover.



Fig. 1 Cover plate

- Deinstall the cover plate. It will later be replaced by a new one (Fig. 1).

Cover of the cable module

- Remove the cover. It will later be replaced by a new one. Dispose of all the covers that are no longer needed.

Drilling and threading holes at the cable module



Fig. 2 Drilling template, orbital drive



Fig. 3 Drill

- Attach the drilling template for the orbital drive and angulation measurements at the cable module (Fig. 2). Ensure that the template is attached to the right as seen from the system.
(Depending on the time of delivery, the cable module comes with different sides that may or may not include recesses. Already existing recesses have nothing to do with the 3D option. The steps for drilling are the same for both versions).
- Attach the special drill over the openings of the drilling template. Drill the holes with the 55 mm crown bit (Fig. 3).
- The drill has to be positioned upside down while you drill the holes. Secure the drill with the belt included in the drill kit.
- Ensure that drill shavings do not drop into the cable module.

Drilling and threading holes for installing the limit switches at the cable module

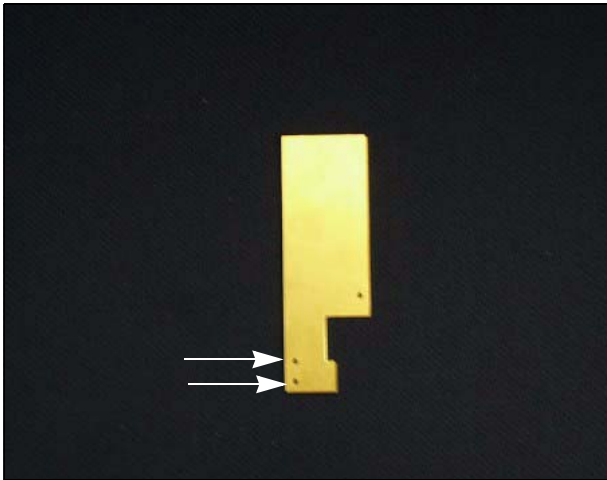


Fig. 4 Drilling template limit switch



Fig. 5 Thread for limit switch

- Use the drilling template for the limit switch (Fig. 4).
- As seen from the operating console, two limit switches are installed to the left.
- Mark the location of the holes (↗ /Fig. 4 and ↗ /Fig. 5).
- Punch-mark the markings and keep the shavings from dropping into the cable module.
- Continue to drill down to 15 mm using a 3.2 mm bit.
- Counterbore the holes.
- Cut the threads using an M4 thread tap (if required, use a drill with a left and right spiral (clockwise and counterclockwise) or a tap wrench).

Cabling, basic unit

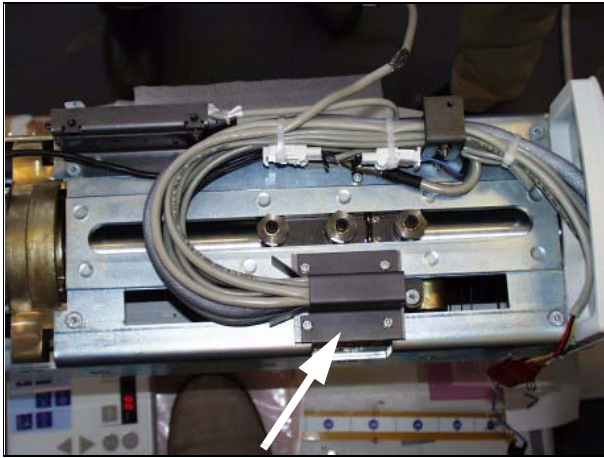


Fig. 6 Remove cable cover

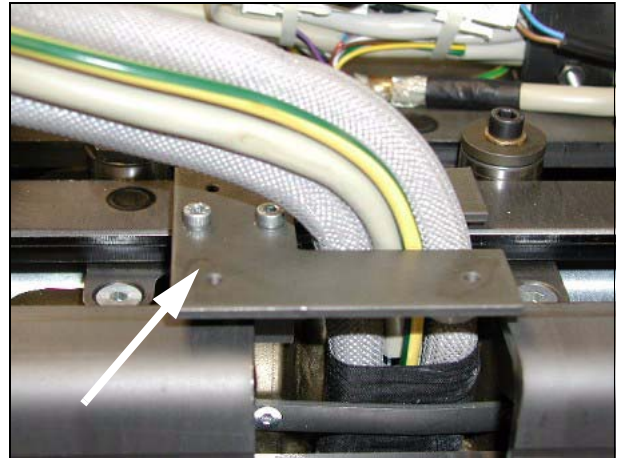


Fig. 7 Existing base plate

- Remove the cable cover (Fig. 6).
- Remove the base plate as well (Fig. 7).

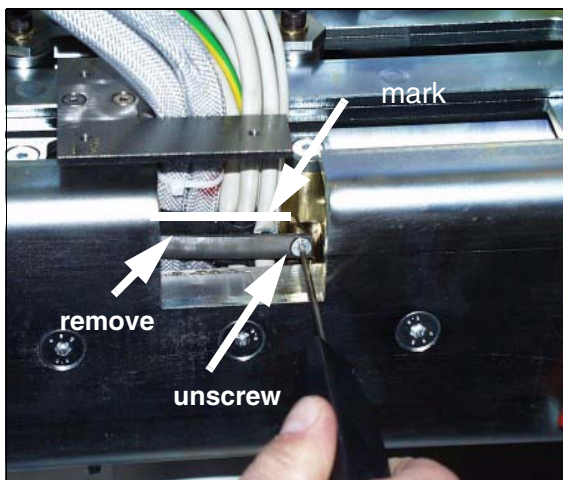


Fig. 8 Cable support, beam entry

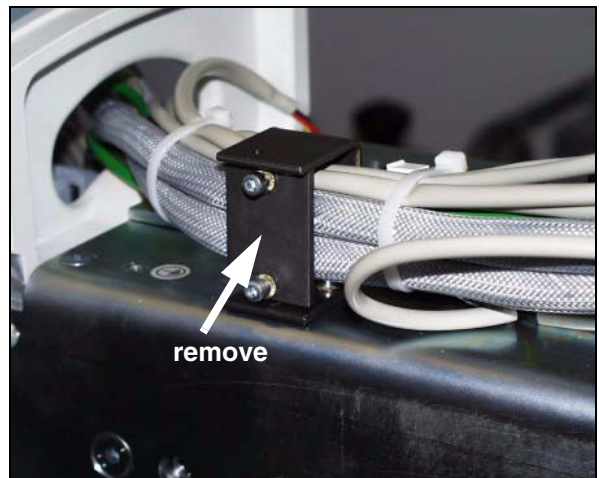


Fig. 9 Upper cable support

- Mark the cables with a pen (Fig. 8) so that you are able to set the exact cable length later on.
- Take off the cable support at the beam entry (Fig. 8).
- Take off the tape (Fig. 8).
- Remove the upper cable support (Fig. 9).
- Move the lifting column into the top position.



Fig. 10 Lower cover, horizontal carriage

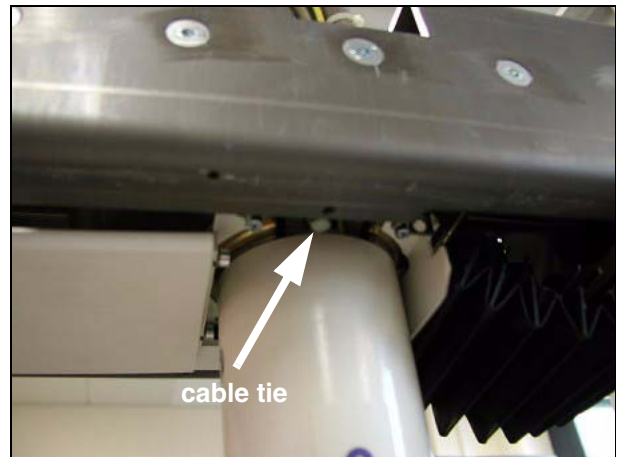


Fig. 11 Remove cable tie

- Remove the cover at the horizontal carriage (Fig. 10).
- Remove the cable tie from the main cable harness (Fig. 11).

Energy chain

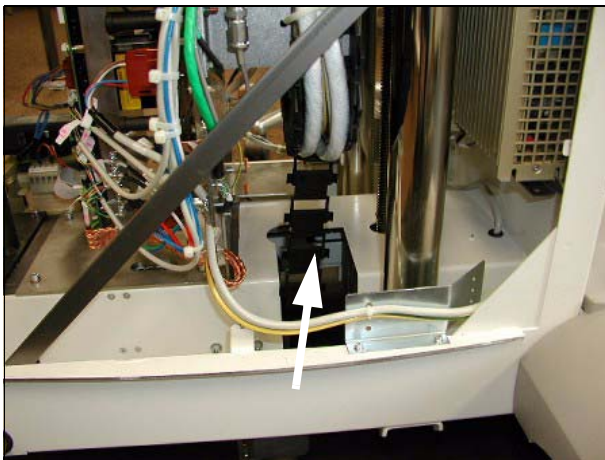


Fig. 12 Energy chain

- If in place, remove the tape (Scotch tape) on both sides of the energy chain (see Fig. 12).
- Open the energy chain fully.

Upgrade cable set, item number 71 39 996

Fig. 13 Upgrade cable set



Fig. 14 Single wire

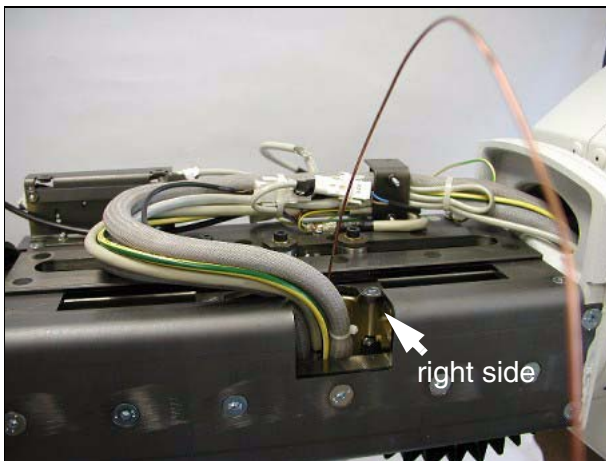


Fig. 15 Wire on top



Fig. 16 Wire below

- Move the single wire (Fig. 14) on the right side from the top to the bottom by pulling it through the horizontal carriage and the lifting column.
- Connect the single wire to the wire at the bundled cables (Fig. 13).
- Lay the cable set out on the floor (Fig. 13).
- Wrap the connections of the two wires using Scotch tape.
- Cover the tape with talcum powder, or use silicone or a similar type of lubricant.
- Pull the wire upward toward the top at the entrance to the horizontal carriage. You will need one person pulling the wire upward and a second person feeding the wire from below (Fig. 16).
- If necessary, push the existing bundle of cables in the recess of the horizontal carriage to the left using a large screwdriver.
- In case of blockage, pull the cables back a little, turn them and continue pulling them toward the top.
- Pull the cables up to the mark.
- Remove the two wires.

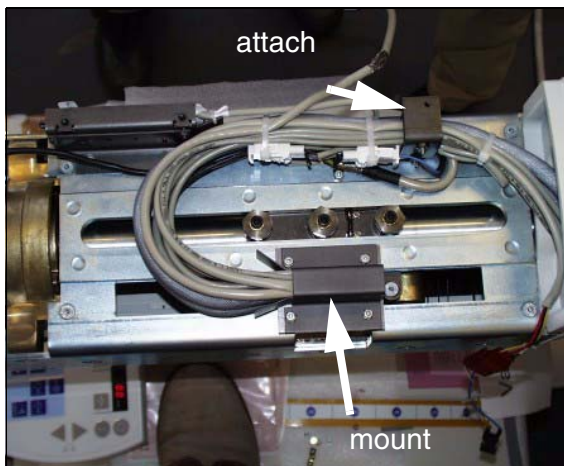


Fig. 17 Routing the cables

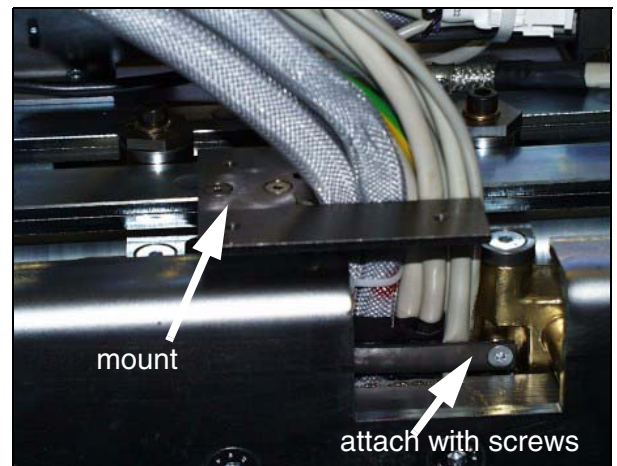


Fig. 18 New base plate

- Route the cables parallel to the C-arm cables. Do not cross cables (Fig. 17).
- Install a new base plate using two Allen screws (Fig. 18).
- Attach the cable support at the entry of the beam.
- Attach the cable cover.
- Reattach the upper cable support.
- Close the energy chain.
- Move the lifting column into the lowest position.

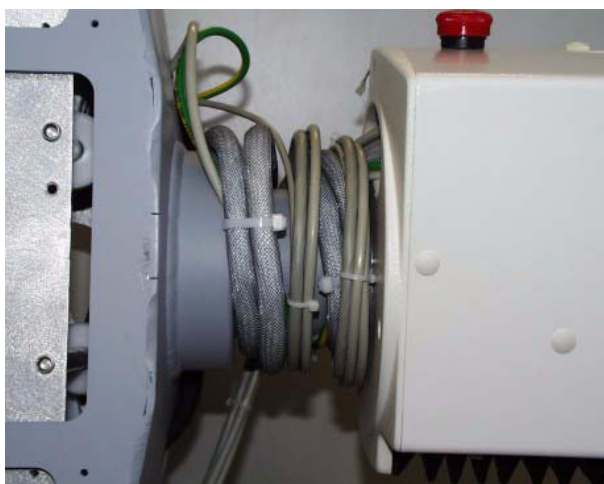


Fig. 19 Cable module, cable fully coiled up

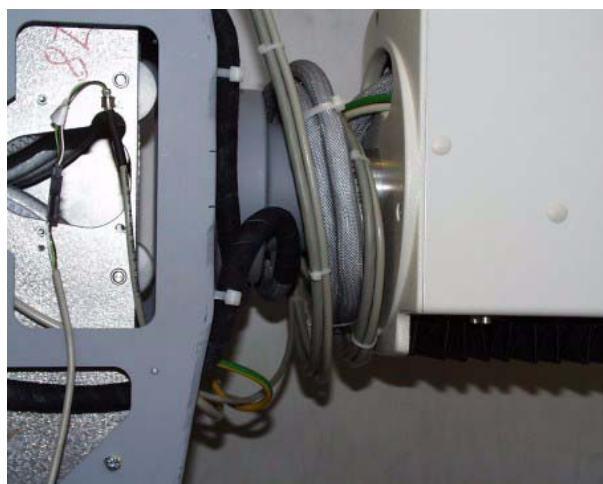


Fig. 20 Cable module, cable half uncoiled



Fig. 21 Cable module, cable fully uncoiled

- Route the cables as shown in (Fig. 19, Fig. 20 and Fig. 21).
- Do not stabilize the newly routed cables with the existing cables (e.g. with cable ties).

Emergency stop relay

- The emergency stop relay including the support is permanently connected to the upgrade cable set, item number 71 39 996.

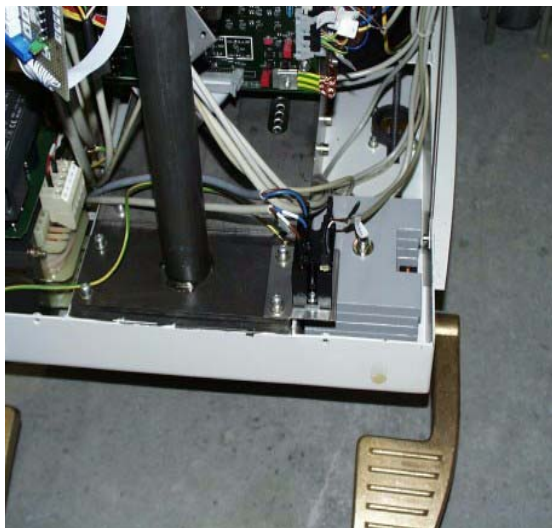


Fig. 22 Emergency stop relay is mounted

- Install the emergency stop relay as shown in Fig. 22. Use the two existing Allen screws for this purpose.

"Emergency stop circuit 71 39 988" package

Fig. 23 Cable number 1

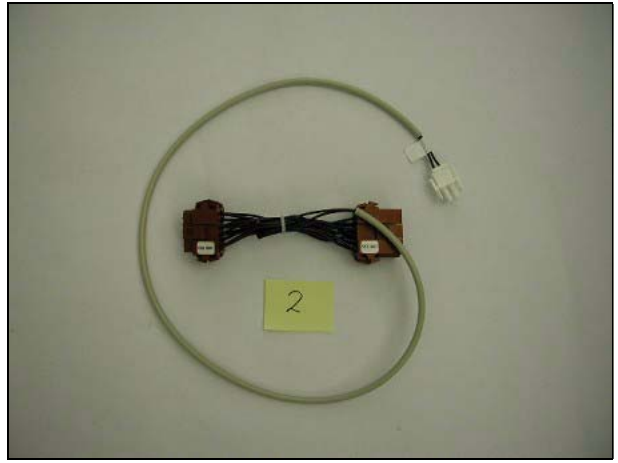


Fig. 24 Cable number 2

Cable no. 1

- Lift the flaps and pull off the lower part of the emergency stop switch from cable 1 (Fig. 23).
- Install the upper part of the emergency stop in the housing of the orbital carriage.
- Reinsert the lower part.
- Connect the connector.

Cable no. 2

- Unplug the connector D30.X1 on PC board D30.
- Connect it with connector D30.X1A of cable 2 (Fig. 24).
- Plug connector D30.X1B of cable 2 into plug-in location D30.X1 on PC board D30.
- Connect plug M16.X20 to plug M16.X20 of the cable harness just installed.
- At the main cable harness
 - Plug M3.X30.1 into plug contact 1.
 - Plug M3.X30.3 into plug contact 3.



Fig. 25 Cable no. 3



Fig. 26 Cable no. 4

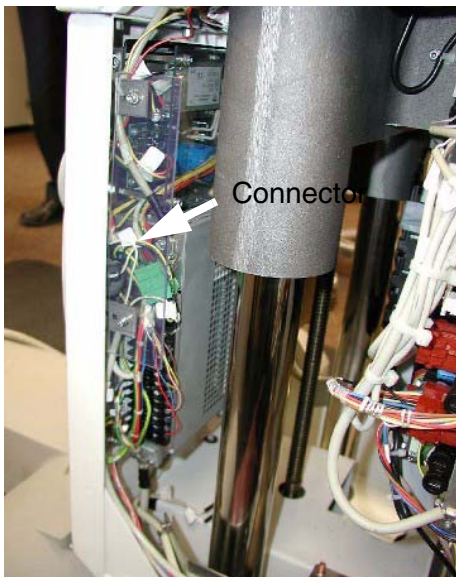


Fig. 27 Frequency converter

Cable No. 3 (Fig. 25)

- Remove the synthetic cover at the frequency converter and pull the green connector (see Fig. 27).
- Insert connector M16FUB into the location vacated by the connector at the frequency converter.
- Connect plug M16FUA with the pulled green connector.
- Insert cables M16K1 3 and 4 into contacts 3 and 4 at the emergency stop relay.
- Route the cable properly and reattach the synthetic cover.

Cable No. 4 (Fig. 26)

- Insert connector D200.X222 into X222 on pc board D200 after it has been installed.
- Insert the other end of the cable into contact 1 and 2 of the emergency stop relay M16.K1.

Orbital drive**NOTICE**

Please read through the entire instructions prior to performing the work described. Loctite bonds very quickly!

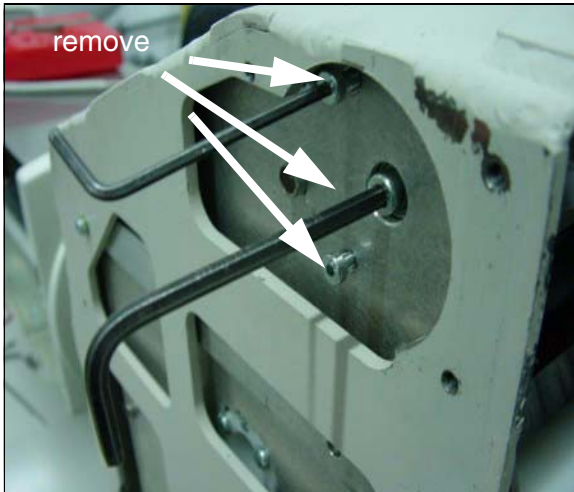


Fig. 28 Remove Allen screws



Fig. 29 Connecting piece

- Move the X-ray tube assembly at the C-arm to the end stop.
- Remove the 3 Allen screws (Fig. 28).
- Clean the thread of the connecting piece with the cleaning agent supplied (Fig. 29). The thread has to be completely free of grease before it is glued in.
- A 6 mm hexagonal insert, the required torque wrench and a suitable screwdriver for the connecting piece should be at hand.
- Set the torque wrench to 8 Nm.
- The opening at the cable module has to point upward for the installation of the connecting piece (C-arm angulation must be 90°).



Fig. 30 A drop of Loctite



Fig. 31 Secure with screwdriver



Fig. 32 Tighten with torque wrench

The following actions need to be performed in short order:

- Place one drop of the supplied Loctite into the opening of the thread (Fig. 30). The thread for the connecting piece points upward.
- Place two drops of Loctite on the thread of the connecting piece (Fig. 29).
- You have to screw the connecting piece into the thread within 15 seconds, first with the screwdriver (Fig. 31) and then with the torque wrench (8 Nm) (Fig. 32). Please note that the connecting piece is screwed in clockwise.
- Immediately remove any remaining Loctite to ensure that it does not touch the ball bearing!

NOTICE**Do not use Loctite to secure other screws.****Centering disk, item no. 71 40 580****Washer, item no. Nr. 71 40 614**

Fig. 33 Individual parts



Fig. 34 Centering disk, fully installed up to serial number 1408

- Attach the washer and the centering disk at the cable module (see Fig. 33 and Fig. 34).

Covers

- Proceed as follows after the SIREMOBIL Iso-C has been moved to the respective room and the brake has been enabled.

Cover of the X-ray unit

- Remove the cover and reattach them after installing the 3D option.

Cover of the horizontal carriage

- Remove the cover and connector M3.X1.
- Reattach the cover after installing the 3D option.

Cover of the cable module

- Remove the cover and dispose of it properly, because this cover will no longer be required.
- Attach the new cover after installing the 3D option.

Centering disk, item no. 71 40 580



Fig. 1 Fully installed centering disk, beginning with serial number 1409

- Attach the centering disk at the cable module (see Fig. 1).

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NOTE

Continue with the following activities after you have completed "Actions up to serial number 1408" in chapter 2 or "Actions beginning with serial number 1409" in chapter 3.

C-arm



Fig. 1 C-arm, starting position



Fig. 2 Mark distance



Fig. 3 Mark hole



Fig. 4 Drill



Fig. 5 Cutting the threads



Fig. 6 Attaching the cam

- Move the C-arm into the 0° position (Fig. 1).
- Apply marks at 20 mm intervals to determine the lateral limit for the cam (Fig. 2).
- Position the cam. Ensure that the cam is flush with the top and mark the holes with the cams laterally at the 20 mm mark (Fig. 3).
- Punch-mark the holes.
- Ensure that shavings or dust do not drop into the C-arm.
- Use a 3.2 mm bit for drilling. Continue until you have drilled through the wall. Ensure that you are not drilling beyond the wall (Fig. 4).
- Counterbore the holes.
- Cut the threads using an M4 thread tap (e.g. use a tap wrench) (Fig. 5).
- Attach the cam using 2 countersunk screws M 4 x 8 (Fig. 6).
- Repeat these steps on the other side of the C-arm.

Limit switches

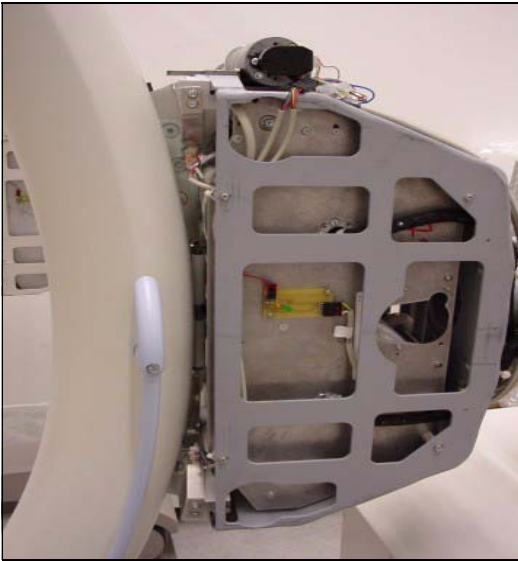


Fig. 7 Attaching both limit switches

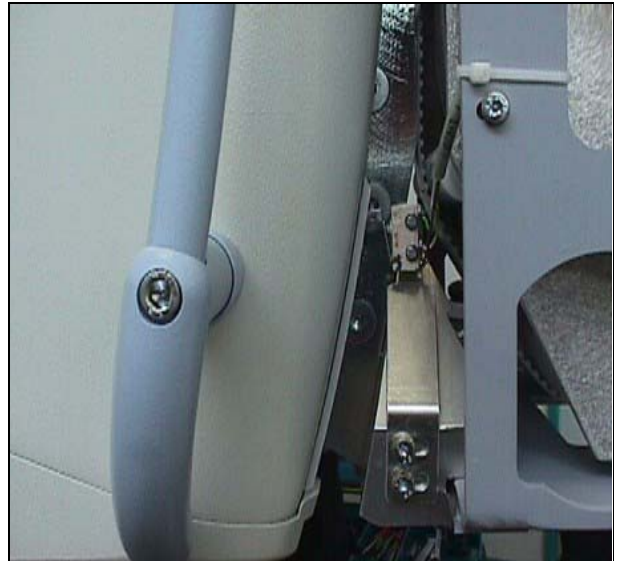


Fig. 8 Limit switch in switching position

- Attach the two limit switches at the cable module using M4 x 8 screws, washers and contact washers (Fig. 7, Fig. 8 and Fig. 9).

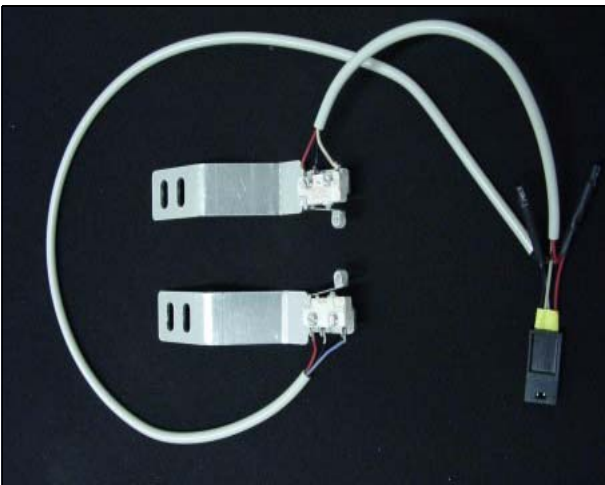


Fig. 9 Limit switch with cabling



Fig. 10 Setting the limit switch

Setting the limit switches

- Move the C-arm by hand into the end position.
- Attach the two limit switches so that the cams enable the switching mechanisms at the switches (Fig. 10).
- When set correctly, you can hear the click emitted by the limit switches.
- Angulation 0°.
- Test the function of the limit switches by moving the C-arm into the +95° und -95° orbital positions.
- Check these settings at least twice.

Installing the system electronics for 3D reconstruction 71 39 921



Fig. 11 Picture of the 3D reconstruction system electronics D200

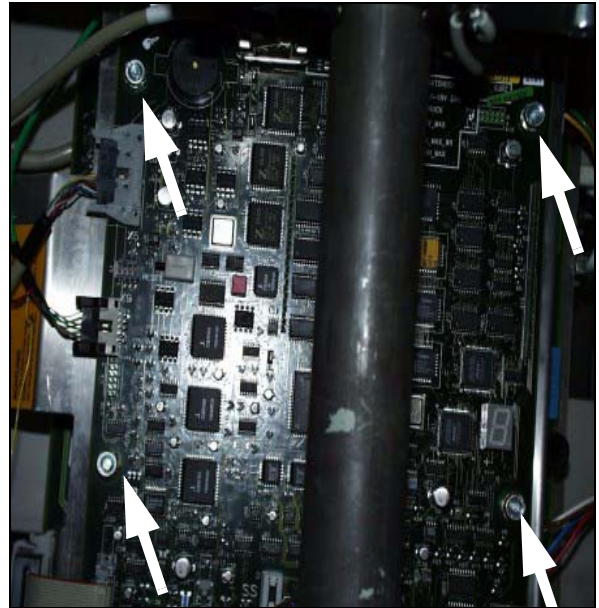


Fig. 12 Picture of D1

- Move the lifting column into the top position.
- Remove the upper 4 mounting screws of D1, leave the washers on D1 (Fig. 12).
- Attach the hexagonal bolts (see Fig. 13).
- Place D200 on the hexagonal bolts.
- Attach D200 with the contact washers and nuts (Fig. 14).

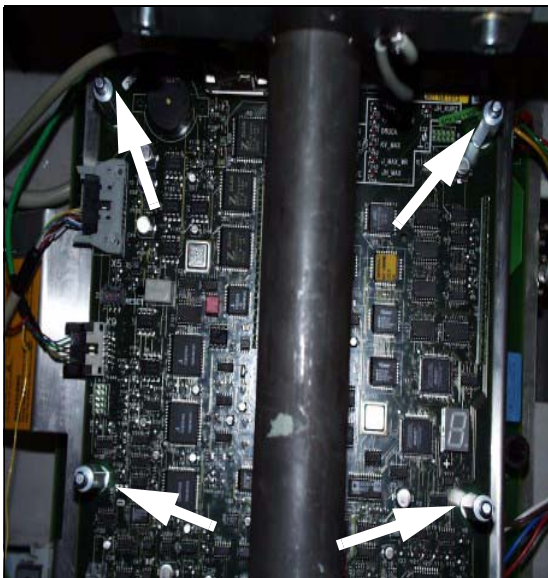


Fig. 13 Bolt mounted, 3D reconstruction system electronics D200

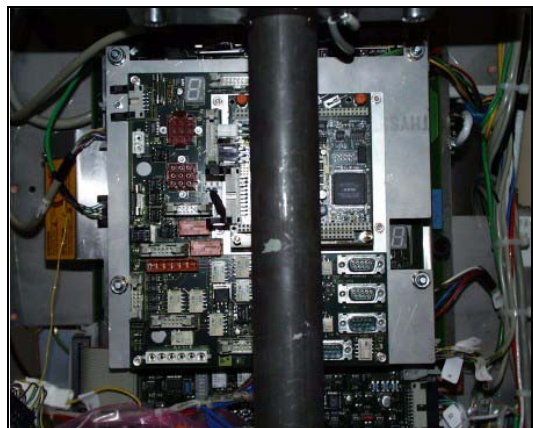


Fig. 14 Installed 3D reconstruction system electronics D200

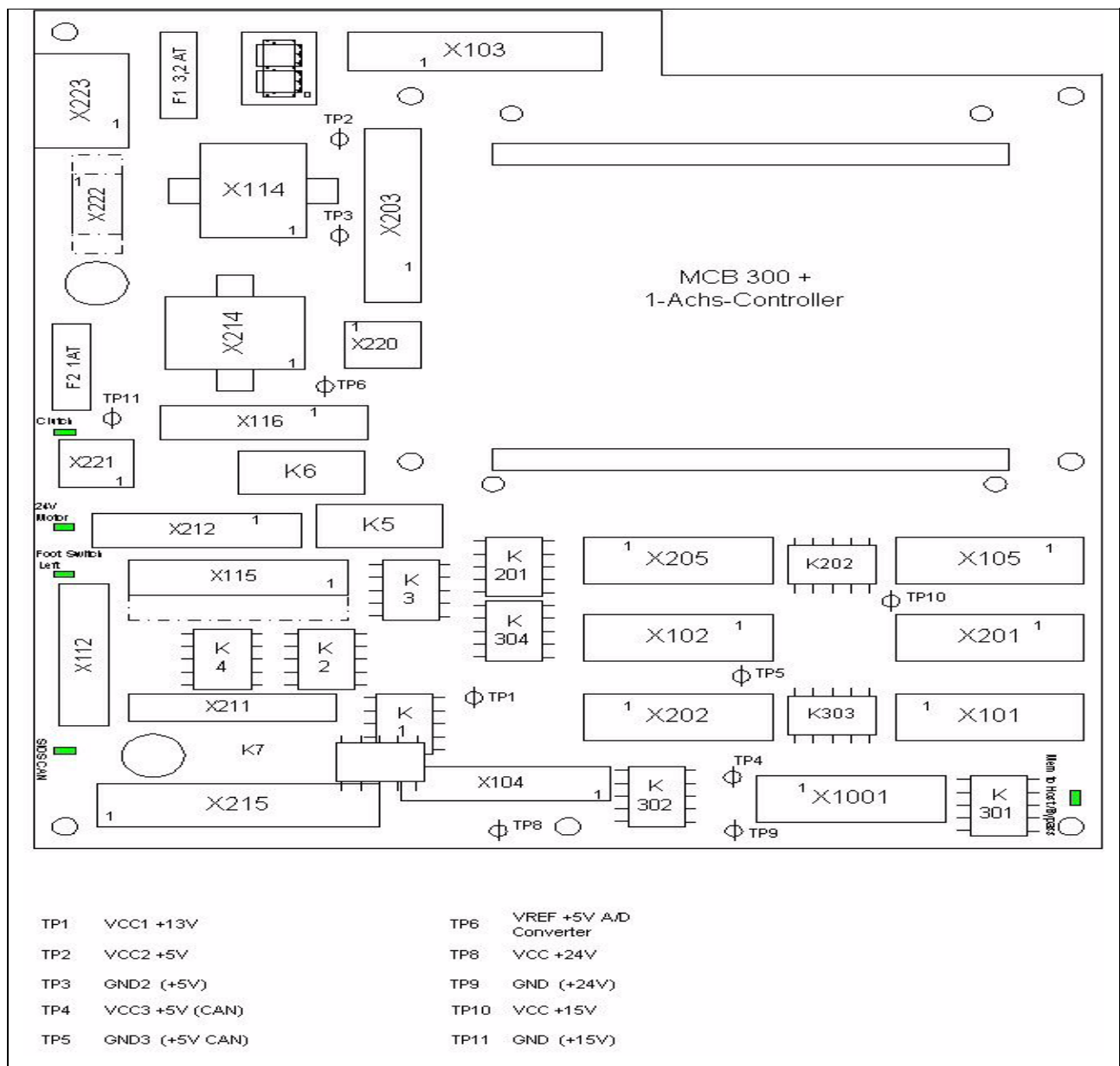


Fig. 15 Connectors D200

NOTE

Cable ties or shielding can be removed as required during the installation.

After successful installation, the shielding must be reestablished and the cables secured with the cable ties.

- Fig. 15 shows the layout of the board D200.
- Disconnect plug D1.X3 from PC board D1. Connect the plug to connector D200.X103 on interface PC board D200. Ensure proper locking.
- On D30, reconnect plug D30.X5 to D200.X115 on interface PC board D200. For this purpose, slip the cable out of the existing shielding and reinsert it from the opposite side.
- On D30, reconnect plug D30.X12 to D200.X112 on interface PC board D200. For this purpose, slip the cable out of the existing shielding and reconnect it to the shielding at D200 (interface) (Fig. 16). Retighten the shielding on PC board D30.

Cable no. 3, item number n.a.

- Connect plug D30.X5 on D30 and plug-in location D200.X215 on D200.

Cable no. 4, item number n.a.

- Use ribbon cable no. 4 to establish the connection D200.X203 - D1.X3.

Cable no. 5A, item number n.a.

- Use ribbon cable no. 5A to establish the connection D200.X212 - D30.X12.

Cable no. 5B, item number n.a.**Without LITHOSTAR MODULARIS option:**

- Use ribbon cable no. 5B to establish the connection D200.X211 - D30.X11.

With LITHOSTAR MODULARIS option:

- Cable no. 5B is not used (no replacement).

Cable no. 2, item number n.a.

- Disconnect plug D30.X4 on D30.
- Insert extension cable no. 2 at plug D30X4A to D30.X4.
- Insert plug D200.X114 on PC board D200.

Cable no. 1, item number n.a.

- Connect cable no 1. to plug D30.X4 on D30 and to plug D200.X214 on D200.

Cable no. 6, item number n.a.

- Connect cable no. 6 to plug D200.X220 on D200 and to D10.X12 on PC board D10.

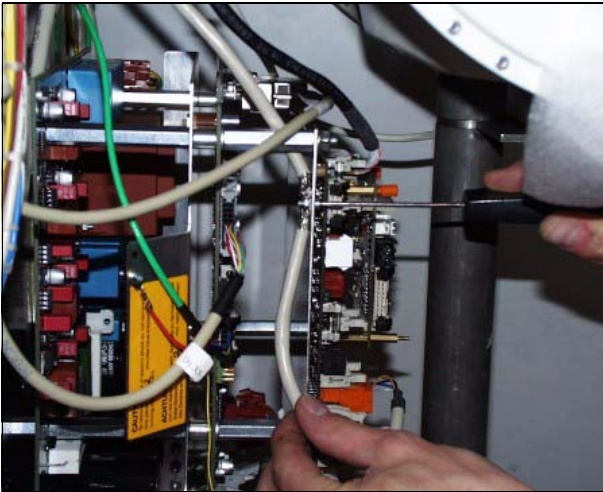


Fig. 16 Shielding connection D200

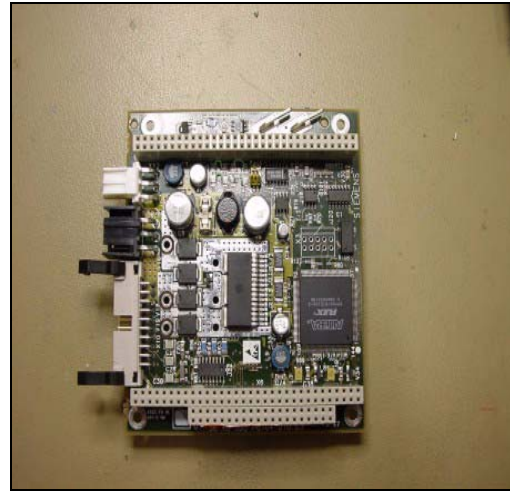


Fig. 17 Pc board D10

Orbital drive cable set, item no. 71 39 970

- D10 is inserted in PC board D200 (Fig. 17).
- Proceed as follows with respect to the previously routed orbital drive cable set.
 - Insert plug D10.X11 into plug-in-location D10.X11 on PC board D10 .
 - Insert plug D10.X10 into plug-in-location D10.X10 on PC board D10.
 - Insert plug D200.X116 into plug-in-location D200.X116 on PC board D200 .
 - Insert plug D200.X221 into plug-in-location D200.x221 on PC board D200.

Cable no. 7, item number n.a. (Fig. 18)

is contained in cable set, item no. 71 39 855

With existing LITHOSTAR MODULARIS option:

- Check whether the interface cable for LITHOSTAR MODULARIS is installed into the mounting location of the CAN connector (see Fig. 20 and Fig. 21). If this is the case, remove the interface cable.

To do so, proceed as follows:

- Unplug connector D30.X11 of the LITHOSTAR MODULARIS interface cable.
- Cut off connector D30.X11.
- Remove the socket of the LITHOSTAR MODULARIS interface cable.
- Install cable no. 7 of cable set 71 39 855 as described in the following.



Fig. 18 Cable no.7



Fig. 19 Front of system



Fig. 20 Routing cable no. 7



Fig. 21 CAN connector is installed

- Remove the plug at the front of the system (Fig. 19).
- Remove the nut and the toothed washer at the CAN connector on cable no. 7.
- Pull the two cables through the nut and the toothed washer.
- Pull the cable through the opening (Fig. 20).

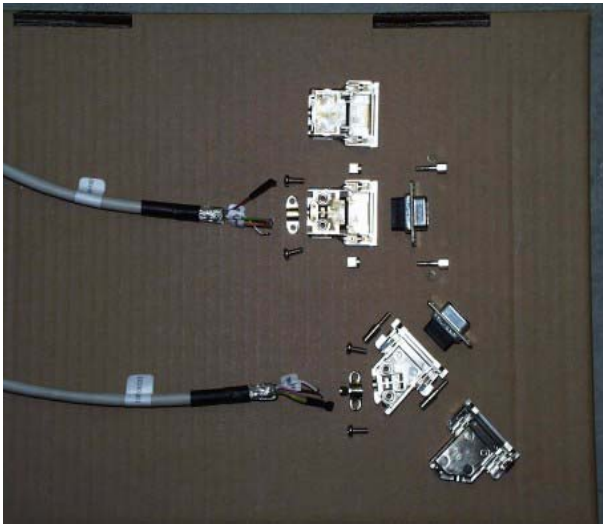


Fig. 22 Connector parts

- Insert the connector into the front, the red marking has to point upward (see Fig. 21).
- Attach the nut using only a long socket wrench. Do not forget the washer.
- Insert the labeled cores with contacts at the end of cable D200.X1001 into the slanted connector housing D200.X1001 (see Fig. 22).
 - Insert core X1001.7 into contact 7 until it locks into place
 - Insert core X1001.2 into contact 2 until it locks into place.
- Move the connector into the housing.
- Attach the strain relief using screws.
- Insert the connector housing and ensure that it fully locks into position.
- Insert the connector housing D200.X1001 into plug-in-location D200.X1001 on PC board D200 and tighten it with screws.

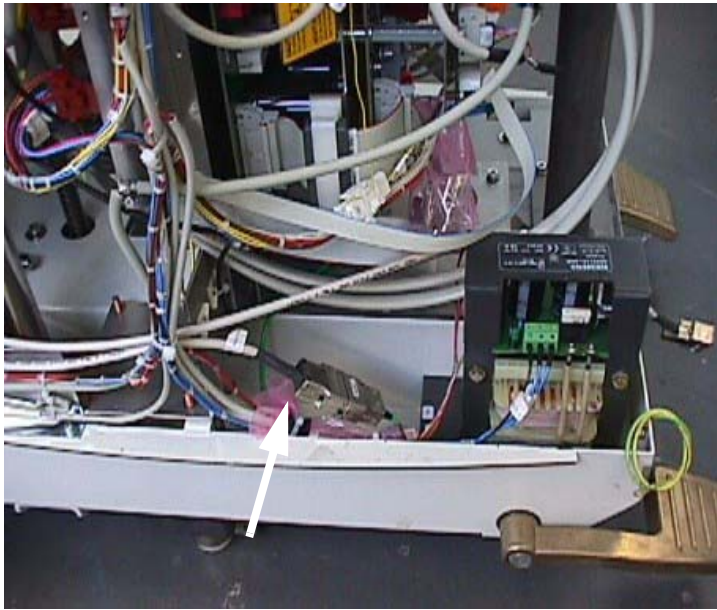


Fig. 23 "Strober" plug is secured

- Insert the labeled cores with contacts at the end of the "Strober" cable into the connector housing.
 - Insert 1 into contact 1 until it locks into position.
 - Insert 2 into contact 2 until it locks into position.
 - Insert 3 into contact 3 until it locks into position.
 - Insert 4 into contact 4 until it locks into position.
- Move the connector into the housing.
- Attach the strain relief using screws.
- Insert the connector housing and ensure that it fully locks into position.
- Connect the "Strober" plug with the "Strober" plug of the main cable harness (Fig. 23).
- Secure it in the system with cable ties as shown in Fig. 23.

Additional work with the LITHOSTAR MODULARIS option

Checking the existing configuration

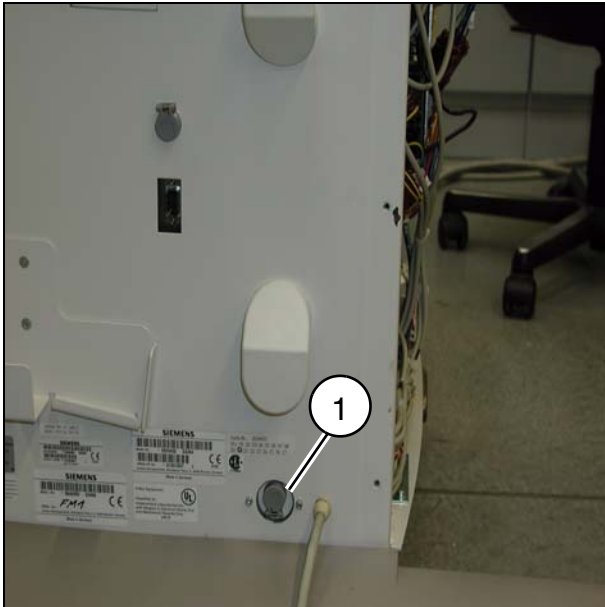


Fig. 24

- If the connector of the LITHOSTAR MODULARIS interface cable is already installed into the mounting location (1/Fig. 24):
 - Plug the Y cable, connector D30.X11, into D30.X11.
 - Plug the 2nd cable end with connector D200.X211 into D200.X211.
 - Skip the following section "Installing the new LITHOSTAR MODULARIS interface" and continue on page 5-1.

Installing the new LITHOSTAR MODULARIS interface

- For easier accessibility, the SIREMOBIL Iso-C lifting column can be moved to the top position. After this, disconnect the SIREMOBIL Iso-C from the power supply.
- Remove the rear panel of the SIREMOBIL Iso-C basic unit.
- Screw down the drilling template as shown in Fig. 25.



Fig. 25



Fig. 26

- To prevent drill shavings from melting into the surface, place a cloth or thin cardboard over the cover (Fig. 25).

Inside:

- With the 3.5 mm drill supplied, drill 3 holes using the holes of the template as a reference.
- Remove the drilling template.
- Using the step drill supplied, open the center hole to 28 mm.
- To do this, drill open the hole until the step drill is immersed in the plate down to the mark shown in Fig. 26 (approx. 0.5 mm from the largest drilled diameter of 30 mm).
- Drill slowly! (approx. 300 to 500 rpm).

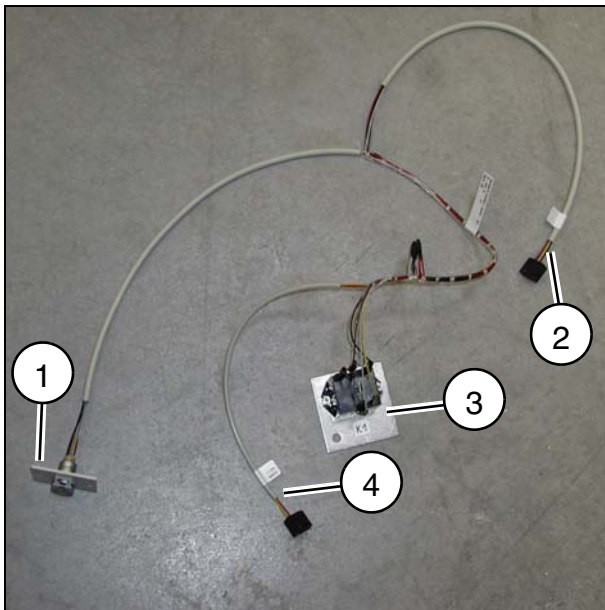


Fig. 27

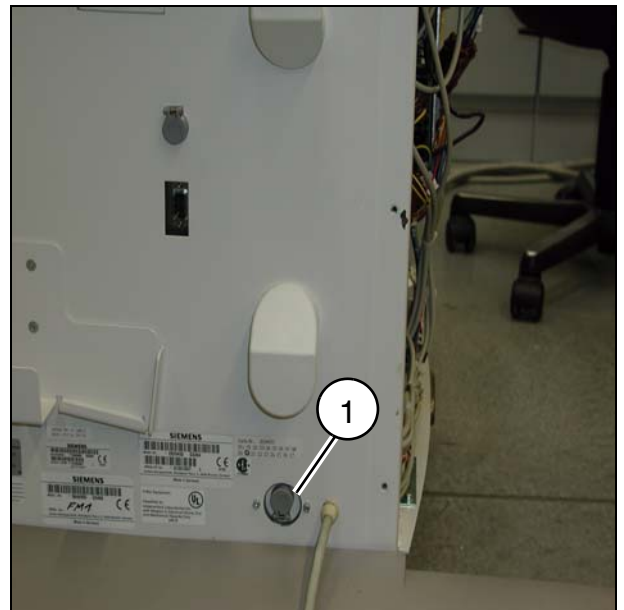


Fig. 28

- When drilling, ensure that the drill is placed vertically against the plate.
- Due to the step length of the drill, a small 26 mm diameter bridge remains on the inner edge of the hole. Remove this bridge with a half-round file. The diameter drilled should be 28 mm across the entire plate thickness. Use the file to remove the burr as well.
- Also deburr the two 3.5 mm holes. This can be done with a drill having a diameter of approx. 8 mm to 10 mm. Place the drill manually against the 3.5 mm holes from the inside and brake the burr.
- Remove all drill shavings outside and inside with a vacuum cleaner.
- Varnish the 28 mm hole with a varnish applicator and allow it to dry.
- Position the connector with holding plate (1/Fig. 27) from the inside.
- The connector is positioned centrally to the 28 mm hole, the lid opens downward.
- Fasten the connector with holding plate using the screws and lock washers supplied (1/Fig. 28).

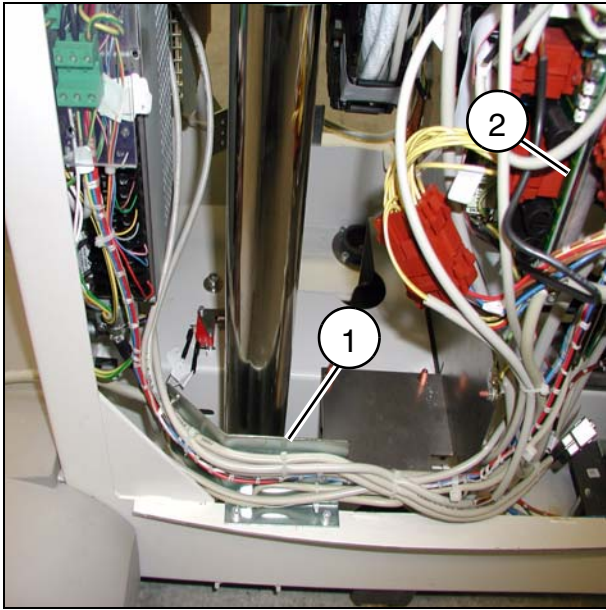


Fig. 29

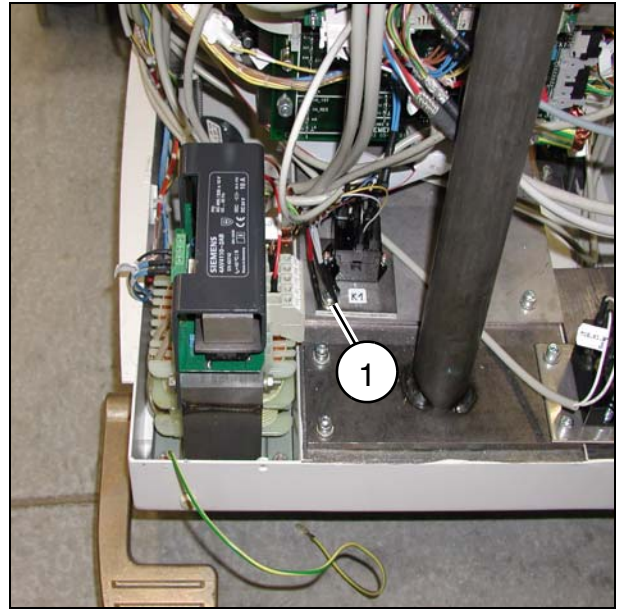


Fig. 30

- Route the cables along the guide plate (1/Fig. 29).
- Route the cable end (2/Fig. 27) to D30 (2/Fig. 29), connect it to connector D30.X11 and lock it in position. The position of connector D30.X11 is shown in the wiring diagram.
- Attach the relay (3/Fig. 27) at the location shown in Fig. 30. To do so, remove the existing screw (1/Fig. 30) and fasten the relay and holding plate using the screw, lock washer and spacer supplied.
- Route the cable end (4/Fig. 27) to pc board D200 and connect it to connector D200.X211.
- Using the cable ties supplied, fasten the cables along the existing cables. Ensure that the cables cannot be pinched when the covers are closed.

NOTE

The wiring diagram for the interface cable is attached in chapter 8.

Please take the wiring diagram out of this document and file it in the system binder under Wiring Diagram.

Orbital drive

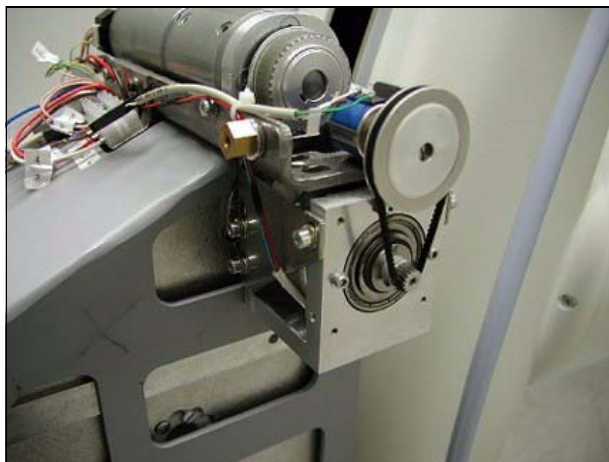


Fig. 1 Orbital drive fully installed

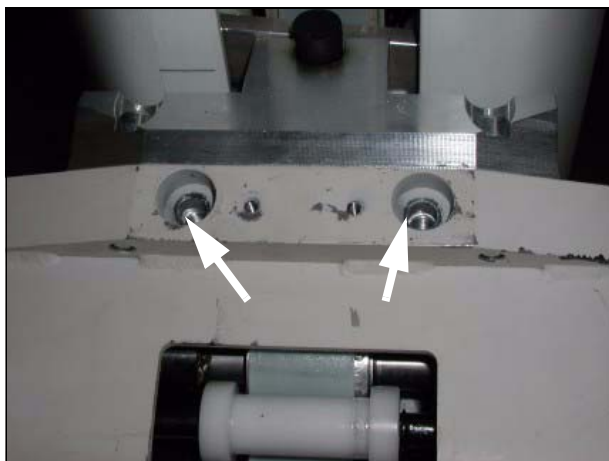


Fig. 2 Screws removed



Fig. 3 Motor unit attached

- Remove the two existing screws (Fig. 2).
- Attach the motor using 2 countersunk Allen screws M 8 x 40 (Fig. 3 and Fig. 4).

5 - 2 2. Part of activities independent of serial number

Coupling unit



Fig. 4 Centering disk

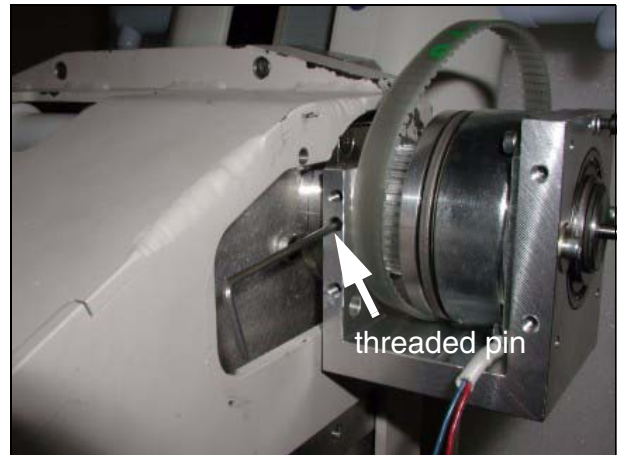


Fig. 5 Coupling unit

- Fit the coupling unit onto the centering disk, the shaft has to engage the connecting piece (Fig. 4).
- Press the coupling unit against the centering disk and attach it to the left and right using the two threaded pins (Fig. 5).

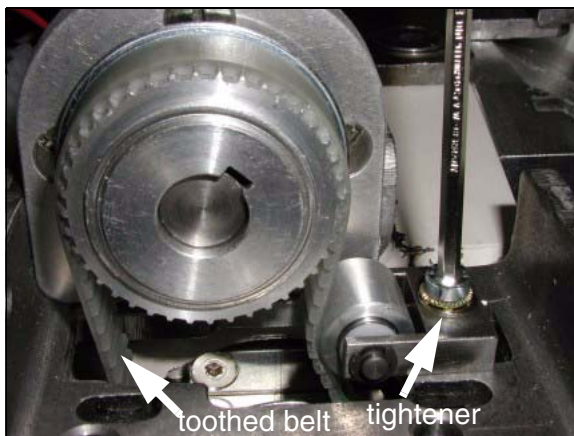


Fig. 6 Toothed belt



Fig. 7 Belt tensioning

- Loosen the belt tightener at the coupling unit (Fig. 6).
- Push the wide toothed belt onto the motor (Fig. 6).
- Tighten the belt. On the opposite side of the belt tightener, it should be possible to press down the belt approx. 2 - 3 mm with your thumb (Fig. 7).



Fig. 8 Lateral bracket

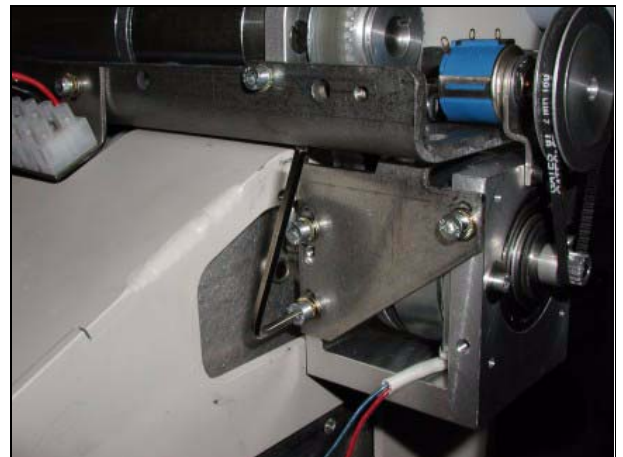


Fig. 9 Lateral bracket

- Attach lateral brackets (Fig. 8) on both sides (Fig. 9), first on top and then on the side.

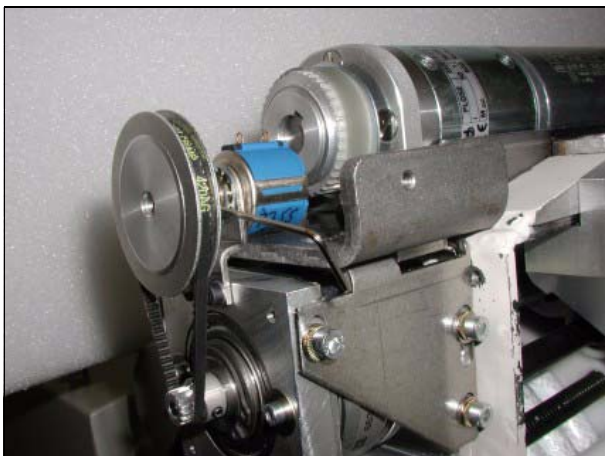


Fig. 10 Belt pulley

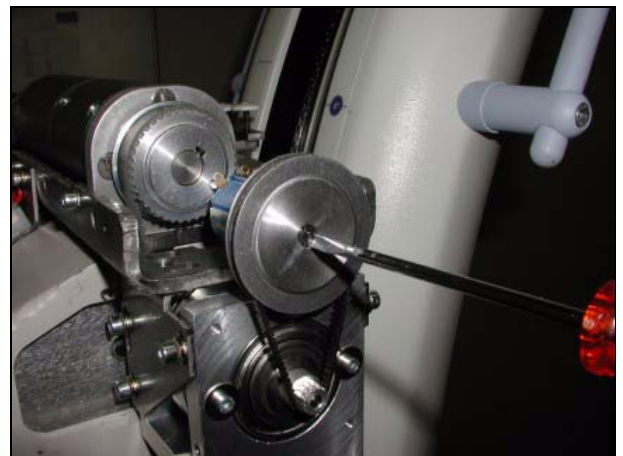


Fig. 11 Potentiometer

- Move the C-arm into the -95° degree orbital position (limit switch = side of image intensifier).
- Loosen the Allen screw at the belt pulley (Fig. 10).
- Attach the outside toothed belt (see Fig. 10).
- Turn the potentiometer counterclockwise into the end position using a screwdriver (Fig. 11).
- Once the potentiometer is in this position, turn it fully clockwise twice.
- Secure the belt pulley with the Allen screw (Fig. 10).

Drive belt

Fig. 12 Removing the belt tightener

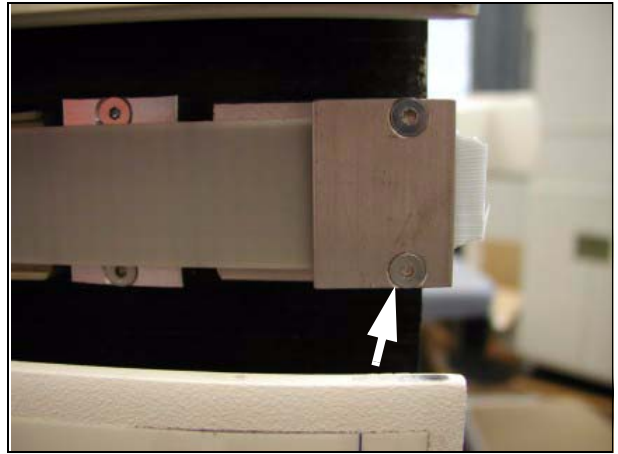


Fig. 13 Taking off the support

To tighten the drive belt, proceed as follows:

- Remove the counterbalancing weight of the C-arm.
- Remove the belt tightener (Fig. 12).
- Remove the support for the drive belt (Fig. 13).
- Increase the tension of the belt drive by one tooth.
- Attach the support for the drive belt .
- Tighten the drive belt .
- Attach the counterbalancing weight for the C-arm.
- Repeat the procedure on the other side of the C-arm.

Angulation measurement



Fig. 14 Mounting screw, angulation part



Fig. 15 Square bar in cable module

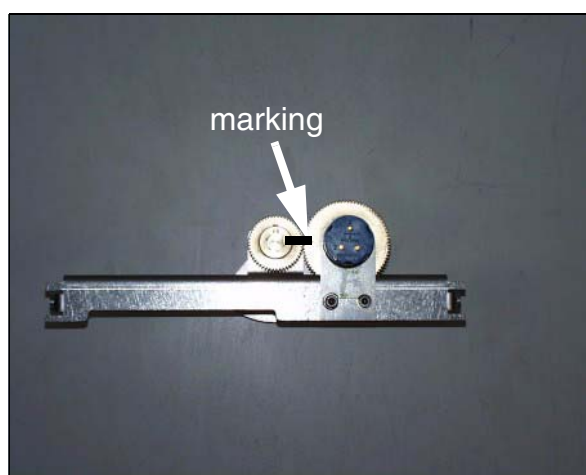


Fig. 16 Premounted angulation part with marking

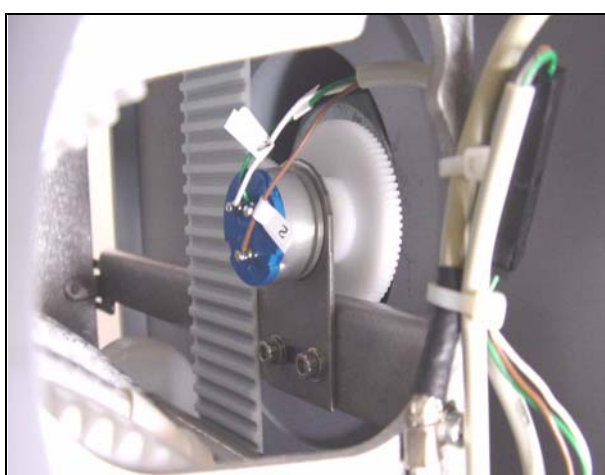


Fig. 17 Angulation part installed

- Remove the square bar from the cable module (see Fig. 14 and Fig. 15).
- Move the angulation part into the cable module and attach it with screws (Fig. 17). Ensure that the markings (black lines) on the two gear wheels match exactly (Fig. 16).

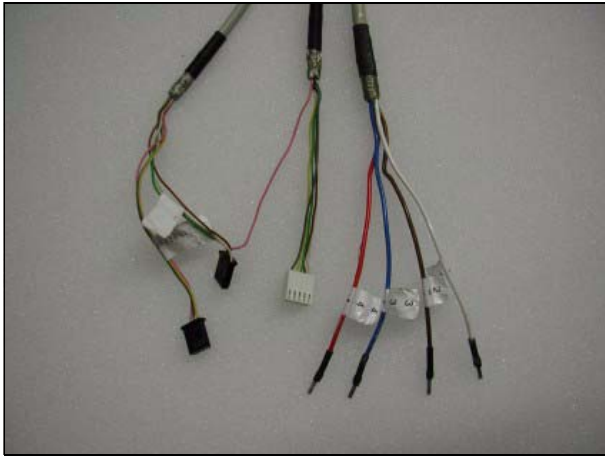
Wiring for the orbital drive

Fig. 18 Connectors, cable set for orbital drive

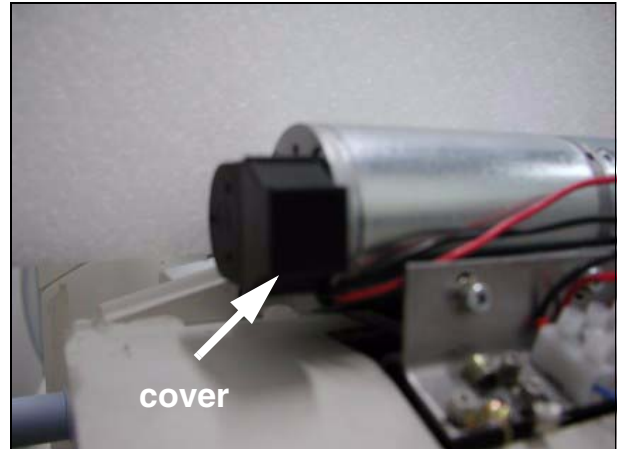


Fig. 19 Plug-in encoder

- Remove the cover from the encoder (Fig. 19).
- Fig. 18 shows the plugs from the limit switch cable of the orbital drive.
- Connect the "Encoder" plug of the encoder cable with the "Encoder" plug under the cover.
- Connect the "angulation" plug of the cable for the angulation part with the "X4" plug of the orbital drive cable set.
- Connect the "limit switch " plug of the limit switch cable with the "limit switch" plug of the orbital drive.

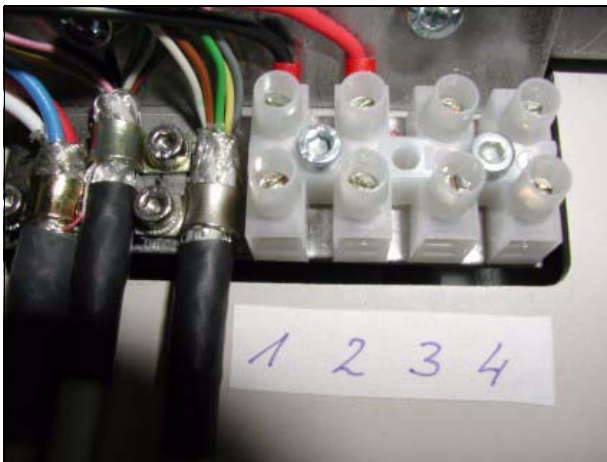


Fig. 20 Terminal blocks

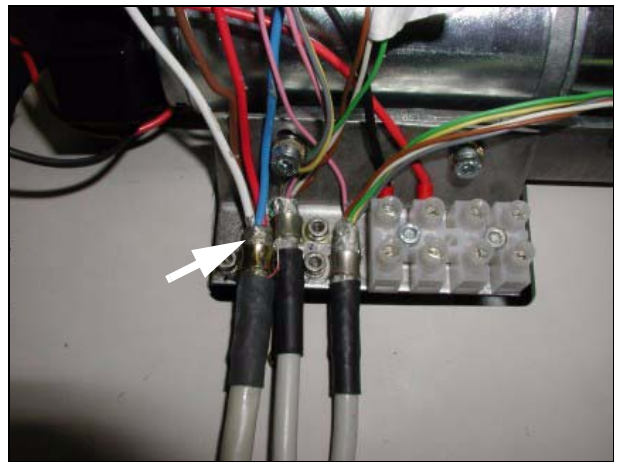


Fig. 21 Shielding

- Secure the shielding and attach it with screws (Fig. 21).
- Connect the cables identified with 1 to 4 to the terminal blocks 1 through 4 (Fig. 20 and Fig. 22).

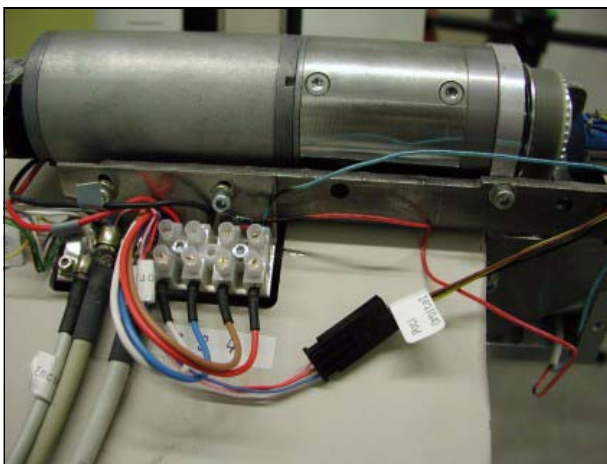


Fig. 22 Connecting the terminal block

- Clamp the red cable of the coupling unit to terminal block no. 3.
- Clamp the blue cable of the coupling unit to terminal block no. 4.

5 - 8 2. Part of activities independent of serial number

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NOTE

Remove the cable ties and/or shielding connections as required during the installation.

After successful installation, reattach the shielding und secure the cables with the cable ties.

Remove the Dicom bridge, if there is one.

Preparations on the monitor trolley

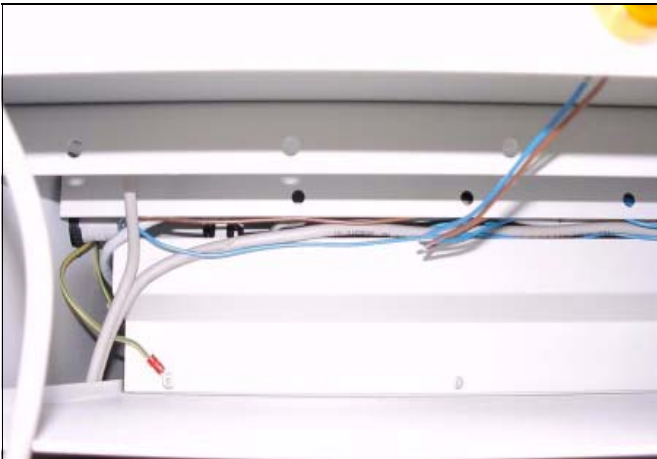


Fig. 1 System manual drawer



Fig. 2 Front cover of system manual drawer

- Remove the rear panel.
- Remove the cover for the system manual drawer (Fig. 1).
- Remove the cable ties.
- Remove the front cover (Fig. 2).

Replacing the monitor

SIMOMED HM

NOTE

If the TFT displays were ordered and delivered, disregard this section. Continue with the section "Replacing the monitor, TFT displays".

- Remove the monitor on the right as follows.

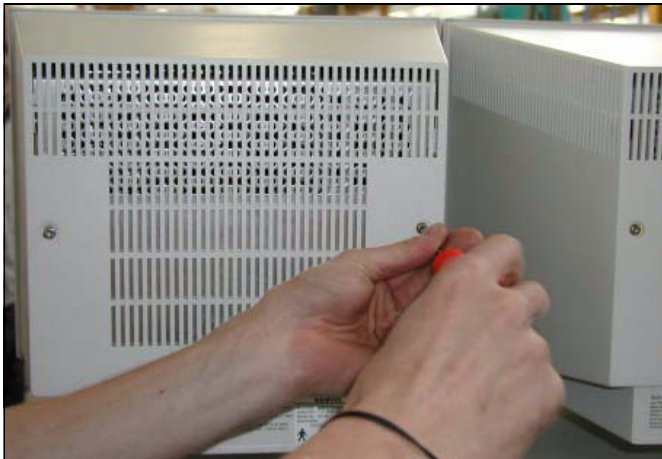


Fig. 3 Monitor cover



Fig. 4 Shielding plate

- Remove the monitor cover (Fig. 3).
- Remove the shielding plate (Fig. 4).

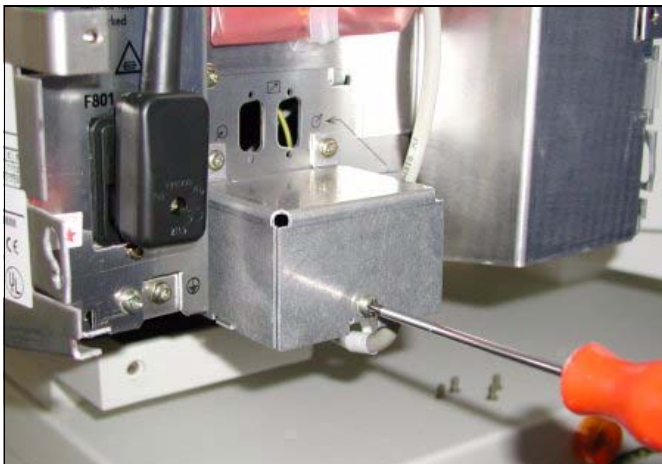


Fig. 5 Connection housing



Fig. 6 Monitor attachment

- Remove the connection housing, if in place (Fig. 5).
- Remove all cables from the monitor to be replaced.
- Reattach all previously removed parts to the monitor.
- Remove the 2 screws at the monitor mounting (Fig. 6).
- Lift down the monitor.



Fig. 7 Base

- Unscrew and remove the base from the monitor trolley (Fig. 7).
- Remove the video cable.
- You do not need the monitor or the upper part of the base plate for SIREMOBIL Iso-C 3D.

6 - 4 3. Part of activities independent of serial number

**Cable no. 13, item number n.a.
is included in system cabling 71 39 855**



Fig. 8 Cable no.13

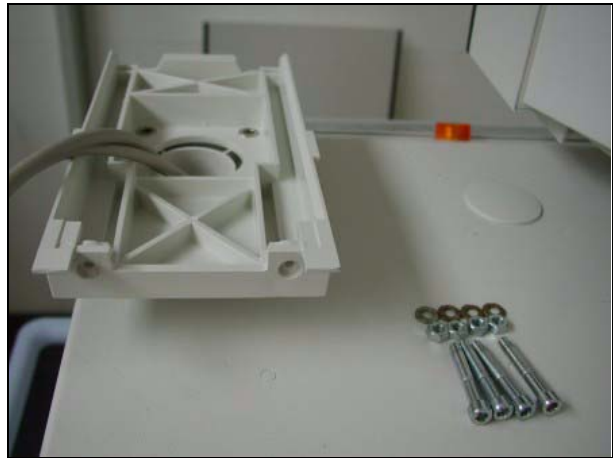


Fig. 9 New base plate for monitor



Fig. 10 Monitor trolley, opening to the left in the back



Fig. 11 New monitor support including cables

- Pull the video cable of the replaced monitor (item number 31 00 232) through to the left and down.
- Attach the base plate for the new monitor to the monitor trolley using 4 Allen screws M 6 x 20 as well as contact washers (Fig. 9).
- Attach the 2 neck screws (see ↗ /Fig. 11). They have to point toward the back of the monitor trolley.
- Pull cable no. 13 (Fig. 8) through the monitor support. Pull cable downward and to the left (see Fig. 10).



Fig. 12 Monitor, unpacked

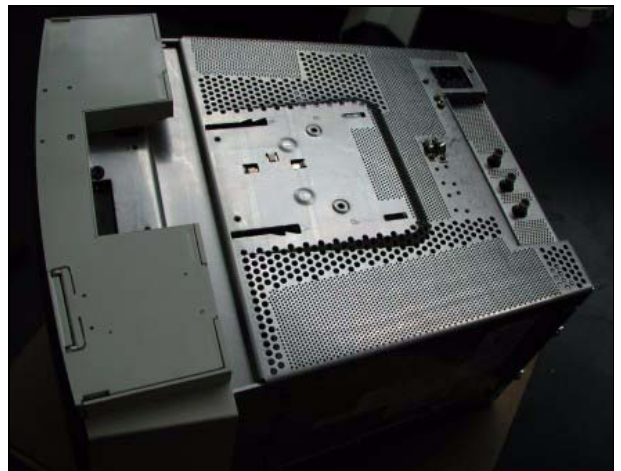


Fig. 13 Monitor cover removed

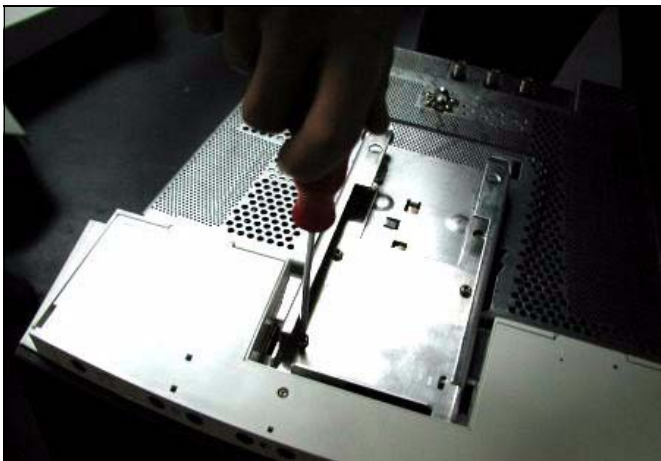


Fig. 14 Monitor support



Fig. 15 Attaching the cables

- Remove the packaging from the monitor and place the monitor on the carton (Fig. 12).
- Remove the rear cover (Fig. 13).
- Remove the monitor dome of Simomed HM (2 screws at the back).
- Attach the monitor carrier to the monitor using 6 screws (Fig. 14).
- Place the monitor on the adapter and tighten the two neck screws (Fig. 15).
- Attach the two cables at the cable supports at the monitor (Fig. 15).
- Slide the monitor housing over it.
- Connect the cables at the monitor, green to video, blue to H/H+V, red to V.
- Connect the power plug of the old monitor to the new monitor.

TFT Displays

NOTICE

If a SIMOMED HM monitor was ordered and delivered, disregard this section. Continue with the section "PC support".

Dismantling existing monitors

- Both monitors should be removed as follows.

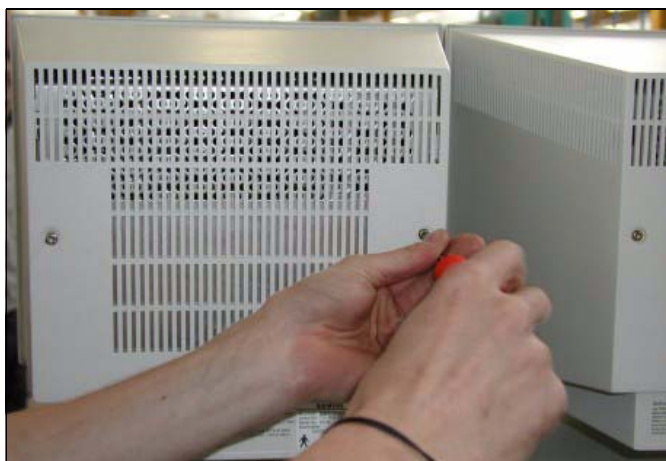


Fig. 16 Monitor cover



Fig. 17 Shielding plate

- Remove the monitor covers (Fig. 16).
- Remove the shielding plates (Fig. 17).

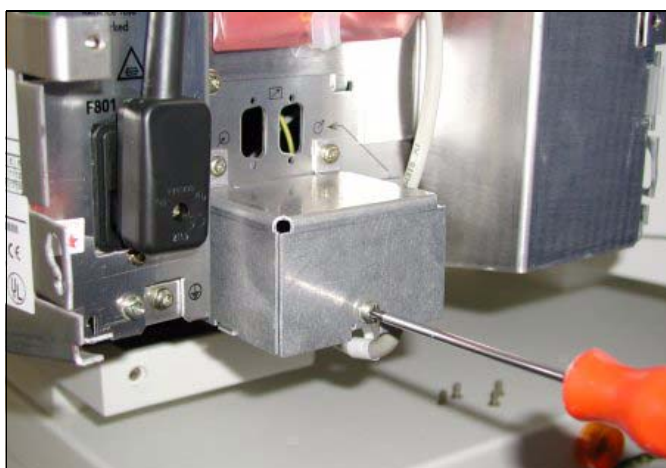


Fig. 18 Connection housing



Fig. 19 Monitor attachment

- Remove the connection housing (only for SIMOMED N monitor 11 02 628, Fig. 18).
- Unplug all cables from the monitor to be replaced.
- Remove the two screws on each monitor attachment (Fig. 19).
- Lift both monitors down.
- Reattach all the parts removed from the monitor.



Fig. 20 Monitor attachment



Fig. 21 Monitor trolley cable openings

- Unscrew both of the monitor bases from the monitor trolley and remove them completely (Fig. 20).
- Remove the video cable of the right monitor. This will be replaced with a new video cable.
- Take both of the power cables and the video cable for the left monitor out of the cable opening and place them in the logbook compartment, so that the cable opening is free.
- Around the center cable opening 4 pre-punched holes are visible (↗/ Fig. 20). 4 metal bolts are set in these holes, thus closing them. Knock out the 4 metal bolts with a punch (or another round object) by striking downward. Remove the 4 bolts from the monitor trolley.
- Raise the center dummy cover, thus closing one of the cable openings on the side (Fig. 21).
- Close the second cable opening on the side and the 8 fastening holes around the side cable openings with the dummy covers provided.

Installation of the video and power line cables in the monitor trolley

Fig. 22 Video cable reference / 3D display

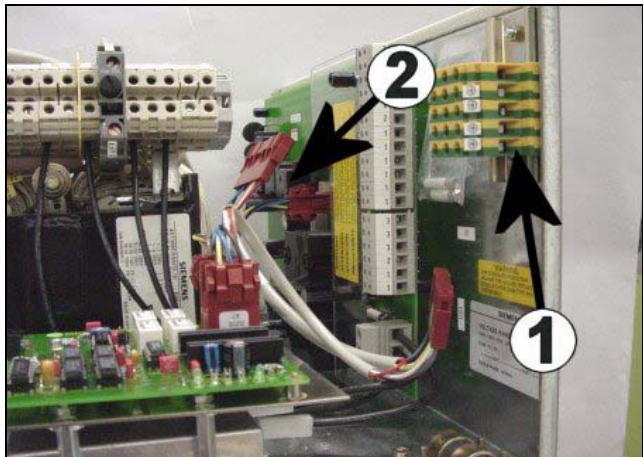


Fig. 23 Video cable Reference / 3D display

- Route the video cable included in the system cabling set 71 39 855 for the TFT display on the right-hand side (3 BNC connectors --- 3 BNC connectors) from the logbook compartment of the monitor trolley through the center cable bush.
- Route the other end of the video cable in the lateral rails of the monitor trolley to the lower compartment of the monitor trolley (video-printer compartment), as shown in Fig. 22.
- Route the second video cable (included in the set attachment of the TFT monitor) of the left TFT display (length approx. 2.1 m) through the center cable bush of the monitor trolley and through the lateral rail to MEMOSCOPE, socket Out 1. Then, plug the cable in and lock it.

NOTE

On one end of the cable, the outer sheath of the new video cable is removed. Connect this cable end to the TFT display.

Installation of the support arm on the monitor trolley

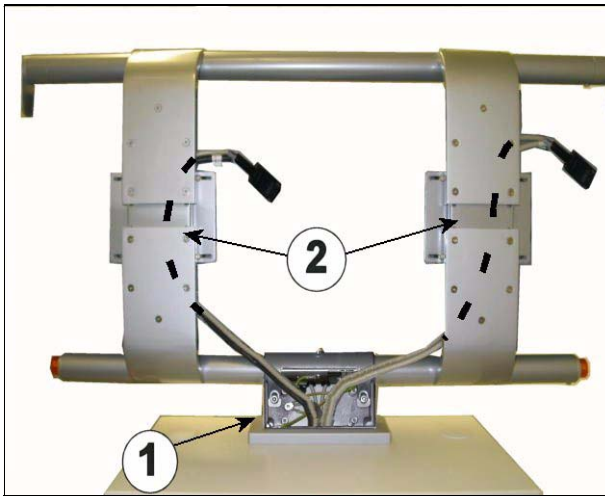


Fig. 24 Installation of the support arm

- Open the rear cover of the support arm base on the TFT display.
- Route the free cable ends of the new power line cables (included in the attachment of the TFT Display) downwards through the support arm holder (2/ Fig. 24), through the center cable bush of the monitor trolley and through the lateral rail to the ON/OFF assembly (Fig. 23) and connect them to the terminal blocks:

NOTE

The new power line cables have a length of approx. 2.6m and are equipped with a straight female connector on one cable end.

- Connect the brown cable ends to terminal block X2.1
- Connect the blue cable ends to terminal block X2.2
- Connect the protective ground cable ends (ye/gn) to the protective conductor bars (1/ Fig. 23).
- Route the cable ends of the video cables upwards through the support arm base (1/ Fig. 24) and further through the support arm holder (2/ Fig. 24).
- Place the support arm base above the center cable bush (Fig. 24).
- Starting with the logbook compartment, tighten the screws of the support arm base on the monitor trolley. Use 4 Allen screws M6 x 20, 4 lock washers and 4 plate washers for this (Fig. 24).

6 - 10 3. Part of activities independent of serial number

Installation of the TFT display on the support arm

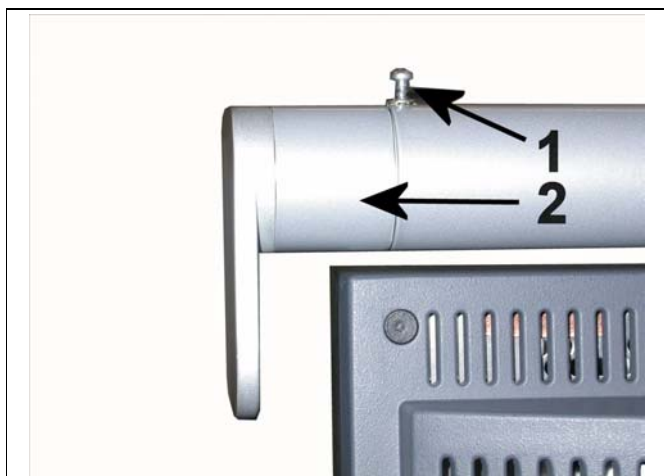


Fig. 25 Collision protection

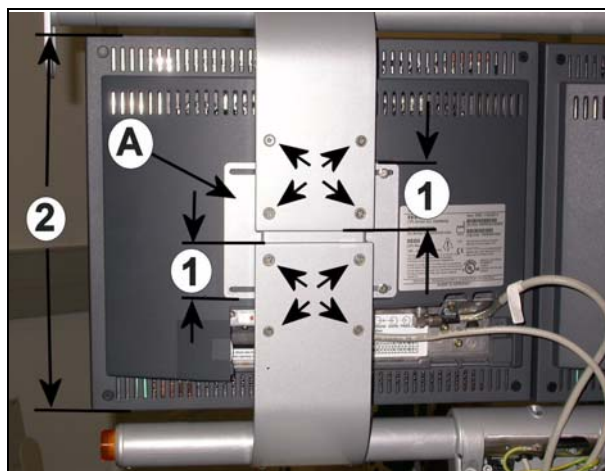


Fig. 26 Adjustment of the support arm

NOTE

You can adjust the width of the support arm and the distance between the top and bottom tube to adapt the support arm to the display in use. In addition, you can modify the vertical centering of the holding plate (A/ Fig. 26).

You can modify the width of the support arm using spacer rings (2/ Fig. 25).

The distance between the tubes and the vertical centering of the holding plate can be modified after loosening the countersunk screws on both vertical display supports (8 on each support). Loosen the 16 countersunk screws only slightly; do not remove them completely!

- Dismount temporarily the collision protection (see Fig. 25). To do so, loosen the screws (1/ Fig. 25) on both top tubes and pull out the collision protection.

Adjusting the support arm to the size of the TFT display

- After loosening the 2 x 8 countersunk screws on the support arm (7/ Fig. 26), you can adjust the distance between both tubes as well as the vertical position of the holding plate (A/ Fig. 26).
- To permit easier adjustment, it is recommended to calculate and pre-set the distances (1/ Fig. 26) before the TFT displays are attached.

Calculation of the distances (1/ Fig. 26):

$$\text{Distance (1/ Fig. 26)} = 17 \text{ cm} - \frac{\text{Height TFT Display (cm) (2/ Fig. 26)}}{2} + 4.8 \text{ cm}$$

- Setting the distances results in a distance of approx. 1 cm between the top and bottom edge of the TFT displays, on the one hand, and the tubes of the support arm, on the other hand.

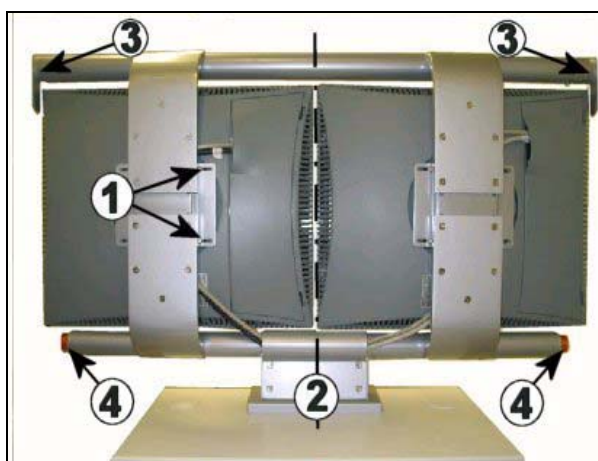


Fig. 27 Installation of the TFT displays

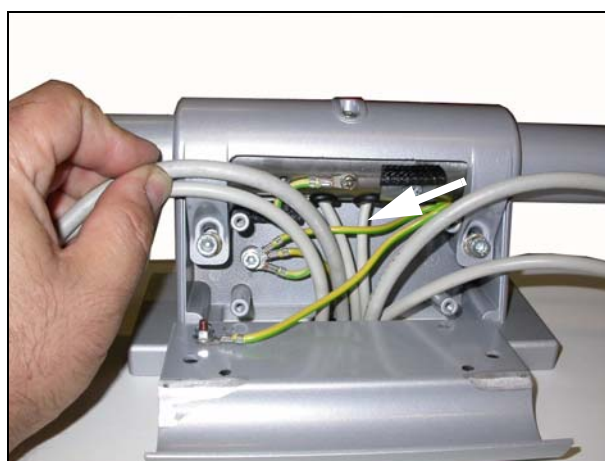


Fig. 28 Routing the cables

Installation

- The collision protection is not yet removed on the left-hand and right-hand side (3/ Fig. 27).
- Place the first TFT display in front of the holder.

NOTE

The displays have 4 thread holes on the rear panel for attaching the holder.

For some displays, special adapter plates are needed for installing the display on the holder (included in the scope of delivery). These plates are to be inserted between holder and display housing.

- Screw in both fixing screws (1/ Fig. 27) only slightly, i.e. do not yet tighten them completely.
- Shift the TFT display out until it is possible to screw in the external screws. Do not yet tighten the screws completely. It must be possible to shift the TFT display horizontally.
- Attach the second TFT display in the same way.
- Place both displays horizontally symmetrical with respect to the center axis (2/ Fig. 27).
 - Make sure that there is a vertical clearance of approx. 2 mm between the displays.
- If both displays are properly positioned, tighten the fixing screws firmly.
- Reattach the collision protection on the left-hand and right-hand side (Fig. 25).
- If it is required to adjust the width, insert a spacer ring on both sides, then push the collision protection in the tube and retighten its screws.
- If required, correct the distance between the displays and the top and bottom tube of the support arm.
 - It is recommended to leave a couple of millimetres for ventilation between the displays and the top and bottom tube of the support arm to prevent collisions due to vibrations during moving the monitor trolley.
 - Both tubes of the support arm should run in parallel to each other.

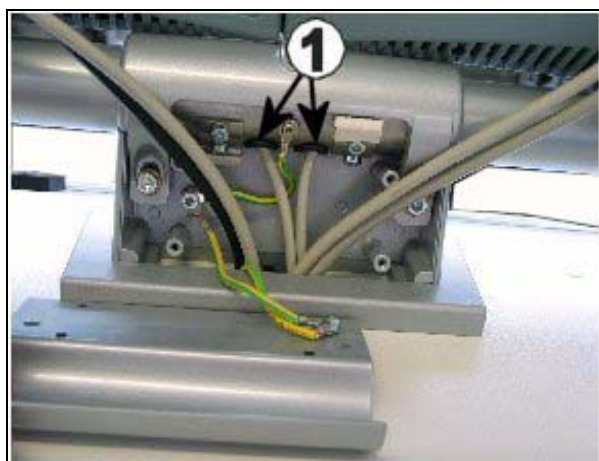


Fig. 29 Cabling of SIEMENS displays

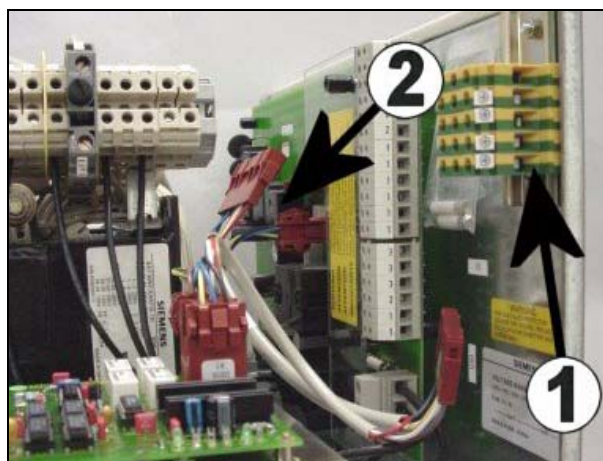


Fig. 30 Routing the cables

Protective ground wiring of the support arm

- On the support arm base of the TFT Display, a short protective ground wire is attached with stripped end. Unscrew the protective ground wire and replace it by the protective ground wire with a length of 2m (included in the set attachment of the TFT monitor; included in the scope of delivery). Route the stripped end of the protective ground wire through the support arm base, through the logbook compartment and then through the lateral rail of the monitor trolley to the ON/OFF assembly. Connect the wire end to a free protective conductor bar (1/ Fig. 30). Make sure that both protective ground wires make good contact.

Wiring the radiation displays of the support arm

- Loosen the lower fixing screws of both radiation displays (4/ Fig.27; installed in the bottom tube of the support arm of the TFT display) and pull out both displays.
- One end of the cable of the additional radiation display (included in the delivery of the support arm of the TFT display) is equipped with 2 free cable ends. On the other end, a connector D50.X7 is installed. Route both cable ends through the bores (1/ Fig. 29) of the bottom tube of the support arm to the radiation displays.
- Connect both radiation displays, then re-insert them in the bottom tube and retighten them.
- Route the cable end with the attached connector D50.X7 through the support arm base to the logbook compartment and then through the lateral rail of the monitor trolley to the ON/OFF assembly located below.
- Unplug connector X4 of the ON/OFF assembly. See (2/ Fig. 30).
- Wire the Y-cable (included in the set attachment of the TFT monitors which is part of the delivery), together with the attached plug connectors D50.X4, D50, X4A and D50.X7, as follows:

Y-cable connector D50.X4A ----- ON/OFF assembly board D50, connector D50.X4

Y-cable, coupling D50.X4 ----- Cable of radiation display, connector D50.X4

Y-cables, coupling D50.X7 ----- New support arm, radiation display, connector D50.X7

- Attach the cables to the monitor trolley using cable ties.

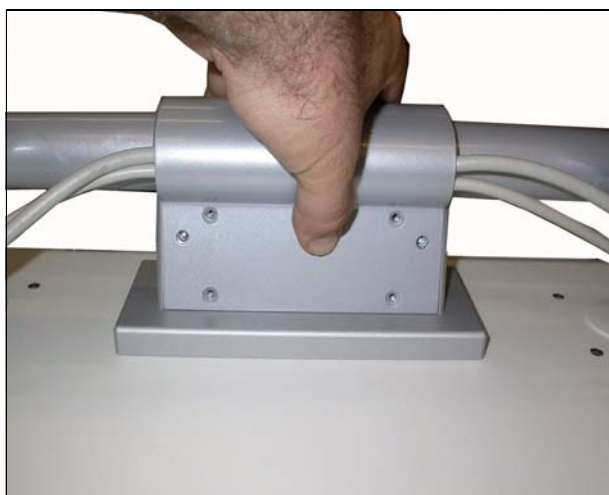


Fig. 31 Cover of the support arm

Wiring of the displays

- Open the rear panel of both TFT displays above the connections.
- Route the power line cables and the video cables to the TFT displays.
- Live image TFT display (left display):
 - Connect the video cable to the BNC socket VIDEO and lock it.
 - Connect the shielding of the video cable to the ground of the monitor.
 - Plug in the power line cable.
- Reference image and 3D TFT display (right display):
 - Plug in the power line cable.
 - Connect the 3-pin video cable to the BNC sockets and lock it:
 - Green cable - VIDEO
 - Blue cable - CS/HS
 - Red cable - VS
- Close both panels again which are located above the display connections.
- If required, retract the power line cables and video cables into the monitor trolley.
 - Route the cables without sharp bending radius.
 - It is recommended to ensure that the cables are covered by both support arm rails in the area between support arm base and the displays (see Fig. 27).
 - The cables should rest in the cable bushes of the support arm base without excessive pulling force or stress (Fig. 31).
- Reattach the cover of the support arm (Fig. 31).
- When present, switch on the power switches of the TFT displays.

PC support

Holes for PC support

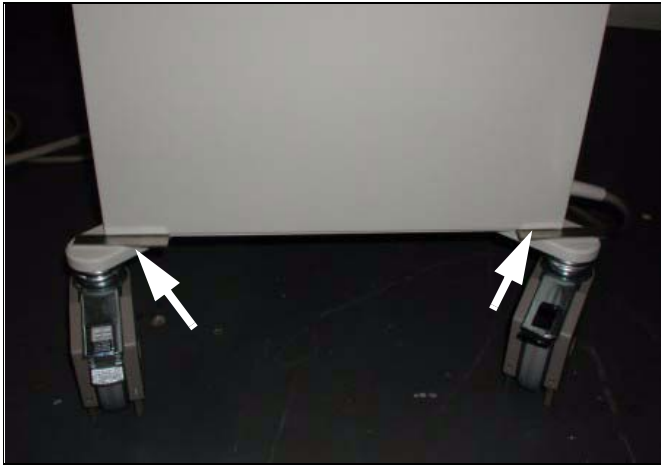


Fig. 32 Spacers

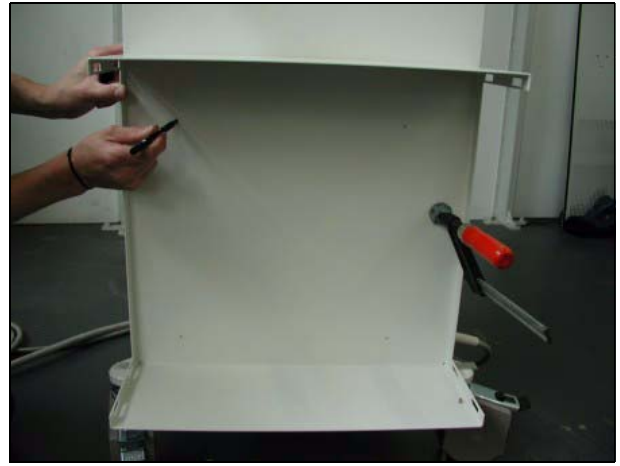


Fig. 33 PC housing

- Place the aluminium spacers (2) on the two rollers (Fig. 31).
- Disassemble the PC housing. You will still need the white foam rubber material.
- Position the PC housing on the spacer. The housing should be flush at the front. If so, attach it with a screw clamp. The ground connection should point down toward the back of the monitor trolley (Fig. 32).
- Mark the holes (Fig. 32).
- Remove the PC housing and spacers again.
- Punch-mark the holes.
- Start to drill the 4 holes at the marked locations using a 3.2 mm drill bit. Ensure that you are not drilling into cables at the monitor trolley.
- Complete drilling the 4 holes by using a 6 mm drill bit.
- Deburr the holes.
- Remove the shavings. Use a vacuum cleaner, if needed.



Fig. 34 Mounting rails



Fig. 35 Mounting rails installed

- Attach the PC housing with the two mounting rails and the M 4 x 12 screws (Fig. 33 and Fig. 34).

Keyboard tray



Fig. 36 Fully installed keyboard tray



Fig. 37 Keyboard tray

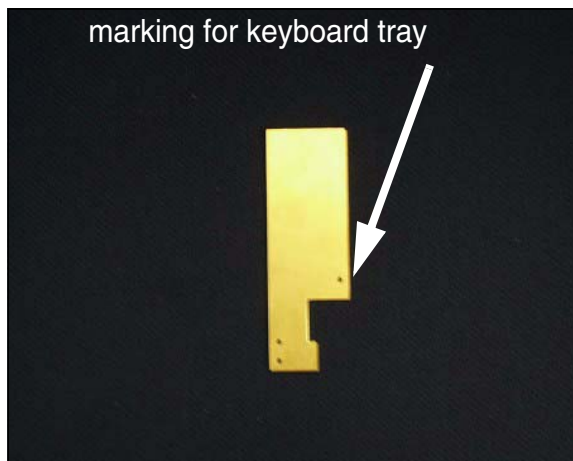


Fig. 38 Drilling template for keyboard tray



Fig. 39 Mark hole at the back

- Fig. 35 and Fig. 36 shows the keyboard tray after the installation.
- Mark the mounting hole at the back (on the left and on the right) using a drilling template (Fig. 37 and Fig. 38).
- Draw the holes using the template. Ensure that the outer edge of the template lies flush with the back.
- Punch-mark the holes.
- Drill the holes with a 2.7 mm drill bit.

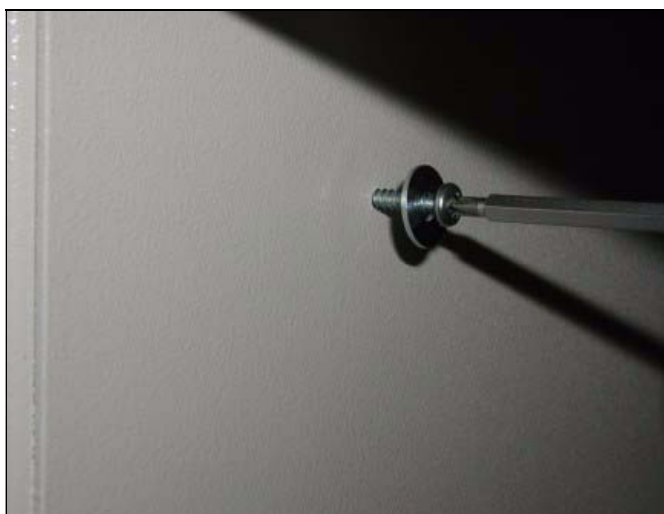


Fig. 40 Tapping screws



Fig. 41 Removing the front screws

- Screw in the two 3.5 x 16 tapping screws using a large washer. Continue until the screws are secure (Fig. 39).
- Remove the two front caps (Fig. 40).
- Pull out the inside tray of the keyboard tray.
- Unscrew the spring steel cross bands in the back.
- Loosen the rear transverse bar of the keyboard tray.

6 - 18 3. Part of activities independent of serial number



Fig. 42 Keyboard tray



Fig. 43 Attachment at the back

- Push in the keyboard tray until flush (Fig. 41).
- Slide in the back section of the keyboard tray at the tapping screws (Fig. 42).



Fig. 44 Marking the holes



Fig. 45 Thread cutting

- Mark the 4 holes (Fig. 43).
- Remove the tray again.
- Punch-mark the hole.
- Drill a 3.2 mm hole.
- Deburr the holes.
- Cut thread M4 (Fig. 44).



Fig. 46 Installing the attachments for the keyboard tray



Fig. 47 Back section

- Reinstall the attachments for the keyboard tray and secure with coated screws M4 (Fig. 45).
- Ensure that the back section of the attachments for the keyboard tray lies flush on one side. Please do not use force (Fig. 46).
- Fill the space on the other side with washers.
- Tighten the tapping screws.
- Reattach the rear transverse bar of the keyboard tray.



Fig. 48 Sliding in the keyboard tray



Fig. 49 Keyboard tray is not aligned as required

- Slide in the keyboard tray (Fig. 47).
- For adjustments, open the mountings of the front plate and move front plate accordingly (Fig. 48).
- Subsequently, tighten the mountings again.



Fig. 50 Partial view of adjusted keyboard tray



Fig. 51 Adjusted keyboard tray

- After successful adjustments, the keyboard tray should be identical with the (Fig. 49 and Fig. 50).



Fig. 52 Keyboard tray with mouse and keyboard



Fig. 53 Cabling completed

- Remove the keyboard tray again.
- Add mouse and keyboard (Fig. 51).
- Attach the two cables to the cable holders. The cable from the mouse to the cable holder (7/ Fig. 51) should be approximately 350 mm long. No particular length is required for the keyboard cable. Both cables have to be wrapped with tape (Scotch tape) at the entrance to the cable clamp.
- Route the connection cables along the spring steel cross bands and secure them with cable ties at 100 mm intervals (Fig. 52).



Fig. 54 Spring steel cross bands

- Install keyboard tray.
- Attach spring steel cross bands (Fig. 53).
- You should be able to pull out the keyboard tray
 - by pressing on both sides along the outside of the tray
 - by pushing against the center of the keyboard tray.
- Attach the protective conductor to the protective conductor bar.

Rear panel of the monitor trolley

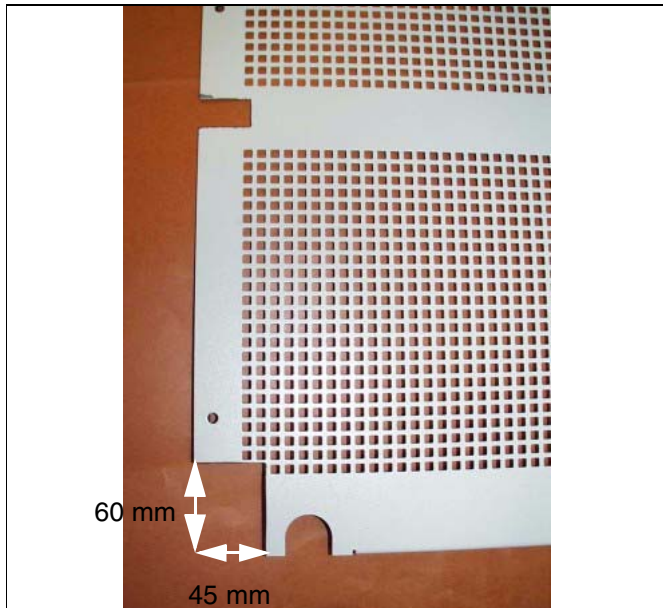


Fig. 55 Cut-out 1

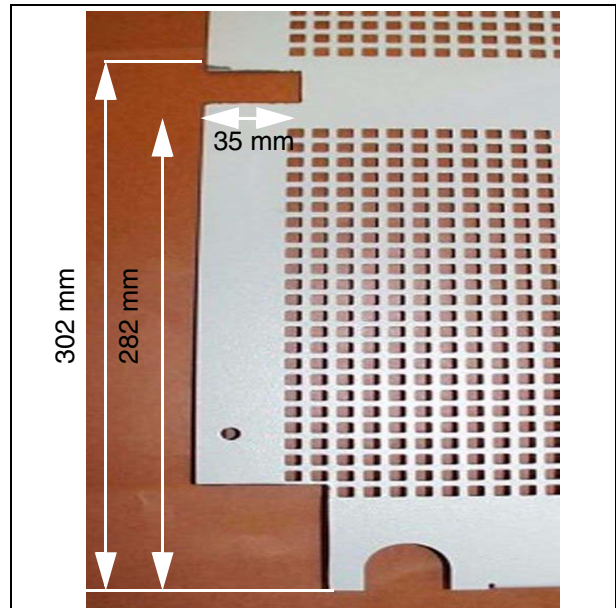


Fig. 56 Cut-out 2

- Draw the two cut-outs on the rear panel of the monitor trolley and cut them out (Fig. 54 and Fig. 55).
- Deburr the edges.

Installing the PC



Fig. 57 PC support



Fig. 58 PC installed

- Remove the PC from the packaging.
- Position the PC in the support (Fig. 56) and secure it with tape (Fig. 57).



Fig. 63 Video switcher, prior to cabling

- Place the installed video switcher in the monitor trolley (Fig. 62).

Cut-off delay D210, item no. 71 40 071



Fig. 64 Mains input filter with mounted spacer bolts

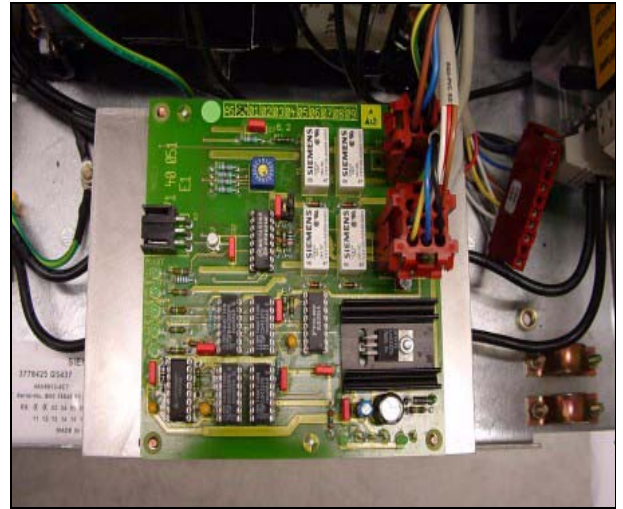


Fig. 65 Cut-off delay D210

- Remove the 4 nuts and the toothed washers at the mains input filter.
- Attach the 4 spacers (= hexagonal bolts) M5 (see Fig. 63).
- Position the support tray and attach it with screws (see Fig. 65).



Fig. 66 Support tray installed

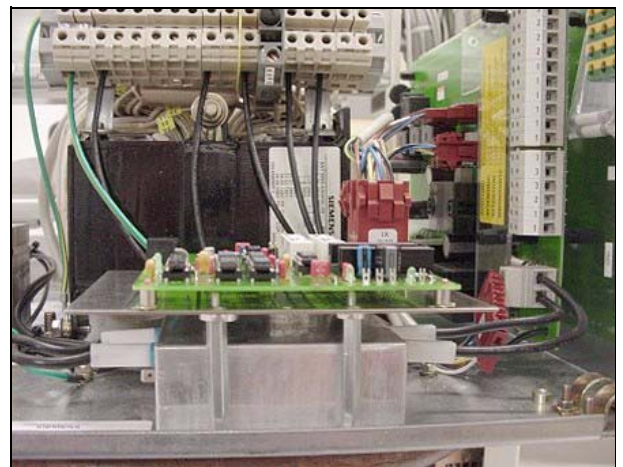
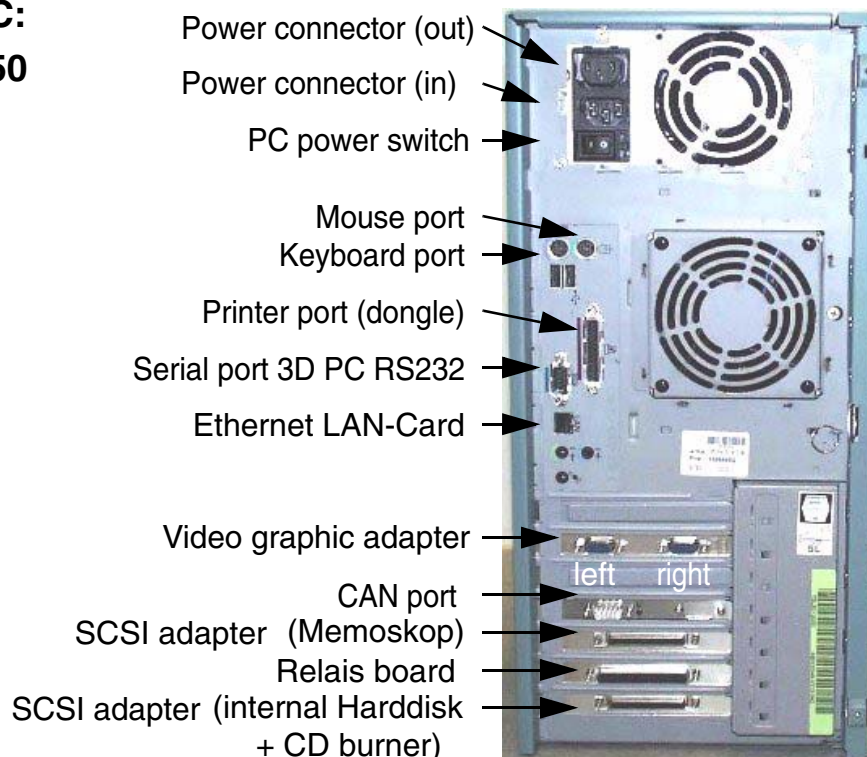


Fig. 67 Side view of installed D210

- Attach the D210 cut-off delay (Fig. 64) on the support (Fig. 66).
- Secure it with toothed washers and nuts.

Cabling of the monitor trolley and reconstruction PC

Type of PC:
Celsius 650



Type of PC:
Celsius 444

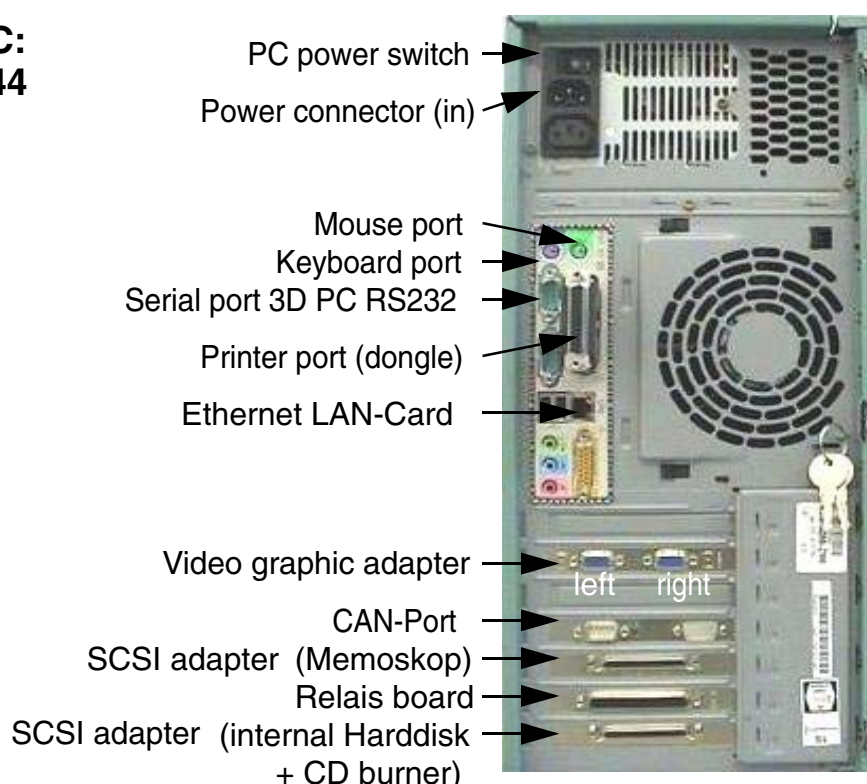


Fig. 68 Back view of reconstruction PC

Cabling of the mouse and keyboard

- Route the cables for the mouse and keyboard through the opening downward at the left side.
- Connect the keyboard cable at the PC keyboard port.



Fig. 69 Mouse port adapter

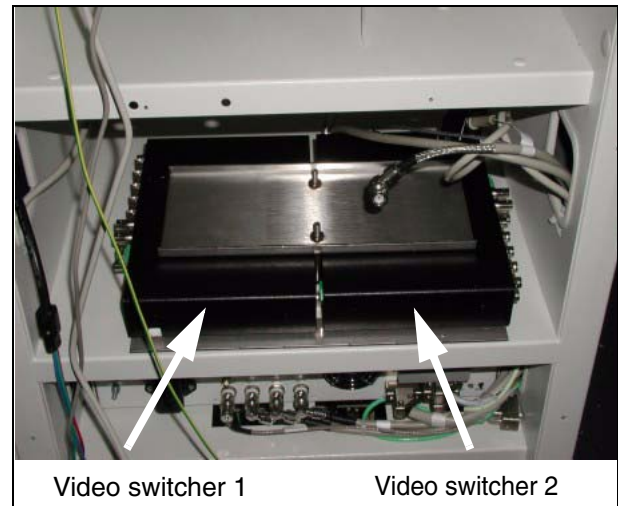


Fig. 70 Video switcher 1 and 2

- Connect the mouse cable to the "Primary Pointing Device" (Fig. 68) plug-in location on the mouse port adapter.
- Connect the cable of the computer mouse port to the mouse port at the PC.

Monitor cable, no. n.a., item number 30 65 844

- Connect the cables to video switcher 1 (see Fig. 69), output terminal "out", green to G, blue to H/C, red to V.

Video cable, no. n.a., item number n.a.

- Connect the video cable (has already be routed downward) from the monitor to input G at video switcher 1 (see Fig. 69).

6 - 28 3. Part of activities independent of serial number

Monitor cable, no. n.a., item number 30 65 844

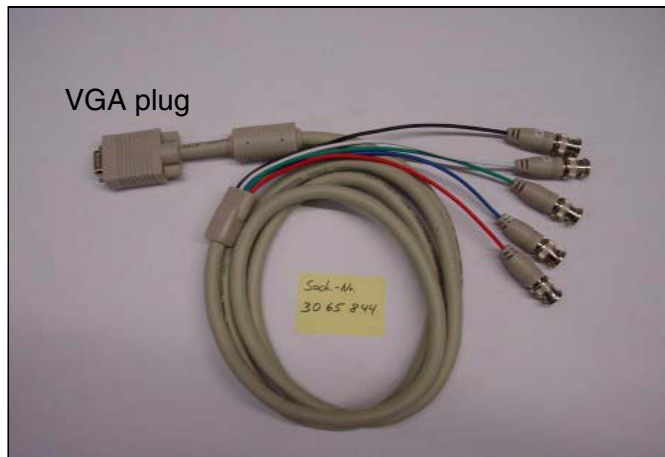


Fig. 71 Cable, item no. 30 65 844

- Insert the VGA plug into the upper left opening at the side.
- Pull it downward.
- Connect it at the PC, right graphics card.
- Connect the 5 monitor cables at input 2 of video switcher 1 (see Fig. 69)
 - red to R; green to G; blue to B; white to H; black to V.
- Slide the excess cable into the side panel.

Cable, no. 10, item number n.a.



Fig. 72 Cable no. 10

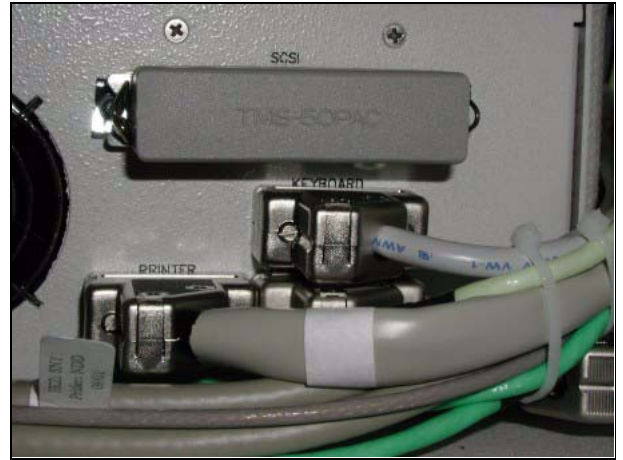


Fig. 73 Memoskop connector

- Remove the keyboard connector at the Memoskop (Fig. 72).
- Connect the "Memoskop RS 2322 " plug of cable no. 10 (Fig. 71) to the keyboard connection at the Memoskop and secure it.
- Connect the keyboard connection plug to the disconnected keyboard connection and secure it.
- Pull plug "3D PC RS 232" through the opening down to the left and connect it to the PC serial port RS232.

Video Out cable, no. n.a., item number n.a.

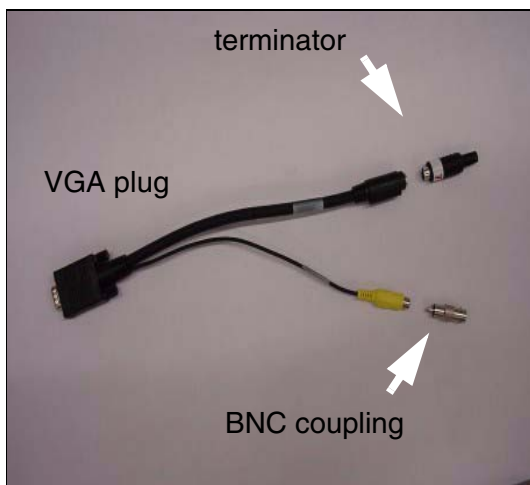


Fig. 74 Video Out cable including terminator and BNC coupling

- Insert the VGA plug (Fig. 58) into the left graphics card.
- Connect the Video Out plug with BNC coupling/ Cinch (see Fig. 73).

- Connect the S-Video Out plug with the terminator (see Fig. 73).
- Do not use the terminator for 3D software, version VA00A. Instead, tape the terminator to the PC housing.
- Use the terminator for the following 3D software .
- Secure with cable ties.

Cable no. 14, item number n. a.

is included 2x in system cabling 71 39 855



Fig. 75 Cable no.14

1. Cable

- Connect one plug (see Fig. 59) at input 2G of video switcher 2 (see Fig. 69).
- Pull the other plug down through the left side panel of the monitor trolley.
- Connect this plug with BNC coupling/ Cinch (see Fig. 73).

2. Cable

- Disconnect the existing Out3 plug at the Memoskop. Feed it through the side opening, pull it upward and insert it at Out G on video switcher 2 (see Fig. 69).
- Connect one plug of the second cable no. 14 to input 1G of video switcher 2 (see Fig. 69) .
- Route the other plug down to the Memoskop and insert it into Out3.
- Slide the excess cable into the side panel.

SCSI cable, no. .n.a., item number 30 66 180

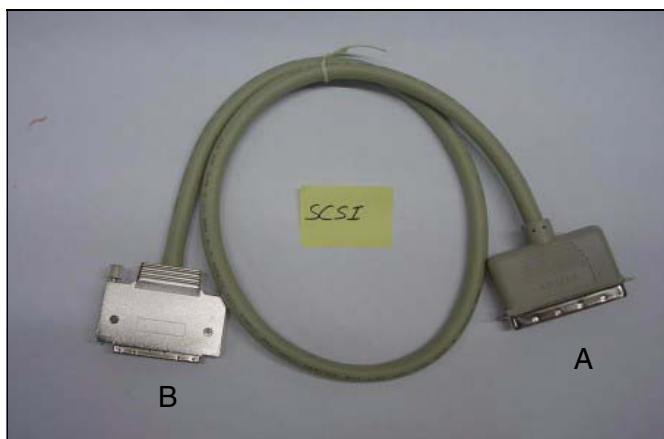


Fig. 76 Picture of SCSI cable

- Remove the SCSI dongle at the Memoskop. This dongle is no longer needed.
- Connect plug A (see Fig. 75) with plug location "SCSI" at the Memoskop and lock it into position.
- Connect plug B (see Fig. 75) with PC plug location "SCSI Adapter" and secure it with screws.

6 - 32 3. Part of activities independent of serial number

**Cable no. 11, item number n.a.,
is included in system cabling 71 39 855**



Fig. 77 Cable no. 11

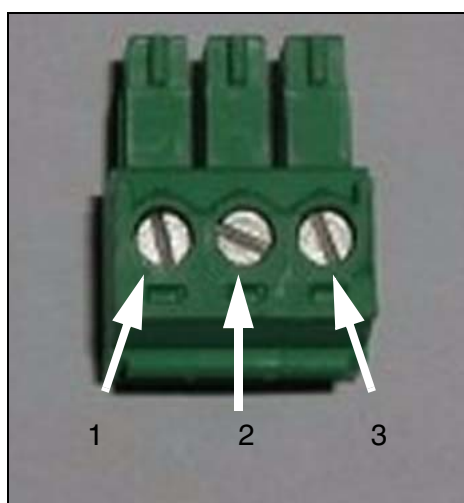


Fig. 78 Video switcher, remote connector

- Connect plug 3D-PC I/O card (see Fig. 76) to the "Relay card" connector at the PC and secure it with screws.
- Route the end VU1 to video switcher 1 (see Fig. 69), from the left side toward the top.
- Attach cable ends 1-3 to the Remote connector (Fig. 77), 1 to 1, 2 to 2, 3 to 3.
- Route the end VU2 to video switcher 2 (see Fig. 69), from the right side toward the top.
- Attach cable ends 1-3 to the Remote connector (Fig. 77), 1 to 1, 2 to 2, 3 to 3.
- Connect the plug to "Remote Status" on video switcher 2 (see Fig. 69).
- Connect the "PC out" plug to D210 X3.

Printer is available

- If a printer exists, disconnect the Remote plug at the printer and connect it with the coupling of the Memoskop. Route the cable upward to the left.
- Connect the 'Printer Remote' plug to the 'Remote' printer connection.

No printer available

- If there is no printer, connect the 'Printer Remote' plug with the Memoskop coupling. If required, insulate the metal housing with tape.
- Plug D100.X1001 is not connected. Insulate the contacts, roll up the cable and attach it using cable ties.

**Cable no. 15, item number n.a.,
is included in system cabling 71 39 855**

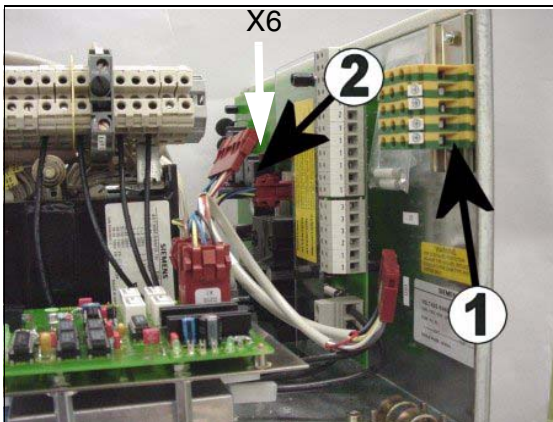


Fig. 79 D50 switch-on circuit

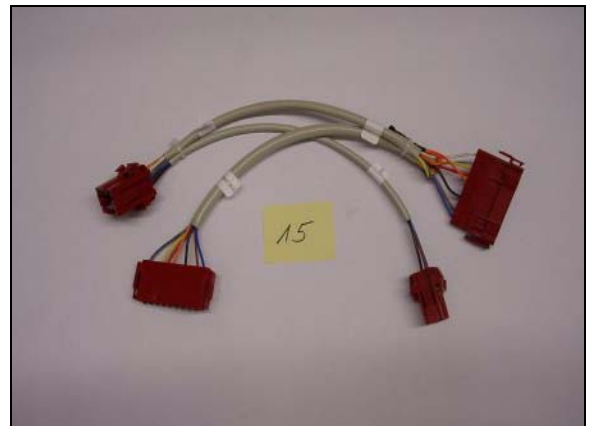


Fig. 80 Cable no.15

- Disconnect plug X6 from switch-on circuit (see Fig. 78), D50.
- Connect plug X6 with plug D50.X6B of cable no. 15 (Fig. 79).
- Insert plug D50.X6A into switch-on circuit D50.X6.
- Insert plug D210.X1 into pc board D210.X1.
- Disconnect plug X5 from D50 and insert it into D210.X2.
- Insert plug D50.X5 into switch-on circuit D50.X5.

6 - 34 3. Part of activities independent of serial number

**Cable no. 16, item number n.a.
is included in system cabling 71 39 855**



Fig. 81 Cable no. 16

- Route the cable connector (see Fig. 80) from the top * downward through the opening on the left side (as seen from the back) and connect it to the PC connection.
- Connect 1 cable outlet (siehe Fig. 80) at video switcher 1 (siehe Fig. 69).
- Connect 1 cable outlet (siehe Fig. 80) at video switcher 2 (siehe Fig. 69).

* If this is not possible, route the 2 cable outlets from the bottom to the top.

Power cable, no. n.a., item number 31 00 281



Fig. 82 Power cable

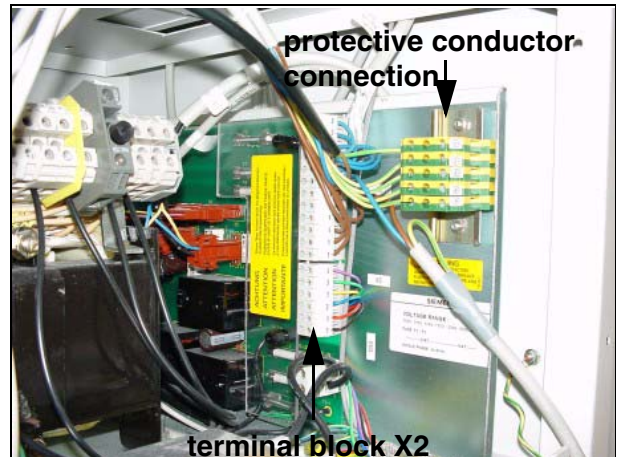


Fig. 83 Terminal block X2

- Connect the power cable to the PC (see Fig. 81).
- Connect the brown cable end to terminal 1 of terminal block X2 (siehe Fig. 82).
- Connect the blue cable end to terminal 2 of terminal block X2 (siehe Fig. 82).
- Connect the green/yellow cable end to the protective conductor bar (siehe Fig. 82).

6 - 36 3. Part of activities independent of serial number

**Cables no. 8 and 9, item number n.a.
are included in system cabling 71 39 855**



Fig. 84 Cable no. 9



Fig. 85 Cable no. 8

- Connect plug 3D-PC CAN of cable no. 9 (siehe Fig. 83) to the "CAN port" of the PC and secure it with screws.
- Connect plug X100 of cable no. 9 (siehe Fig. 83) with plug X100 of cable no. 8 (siehe Fig. 84) and secure it with screws.
- The "Navigation" plug is currently not in use. The connection for this plug is described separately in the document "Navigation start-up".

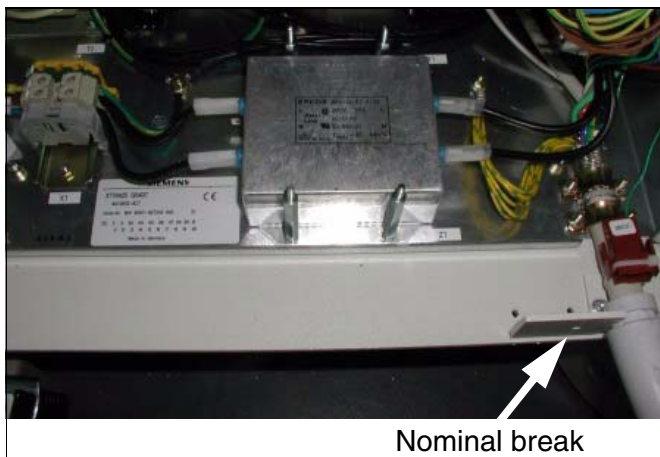


Fig. 86 Cable support



Fig. 87 Cable no. 8 attached

- Use a pair of pliers to break off the plate (Fig. 85).
- Secure the cables No. 8 with cable clamps as shown in Fig. 86.

Attaching the video switcher



Fig. 88 Moving in the video switcher



Fig. 89 Installed video switcher

- Attach the video switchers with 4 tapping screws 3.5 x 16 (see Fig. 87 and Fig. 88).

System manual drawer

- Reattach the front cover to the drawer.

Zipper hose



Fig. 90 Zipper hose

- Unplug the connection cable at the basic unit.
- Route the connection cable between the monitor trolley and the basic unit as straight as possible.
- Route cable no. 8 parallel to the connection cable.
- Unroll the zipper hose (Fig. 89).
- Route the zipper hose underneath the connection cable and cable no. 8.
- Use the "zipper pliers" to close the hose.
- Secure the ends with tape.

**Cable no. 12, item number n.a.
is included in system cabling 71 39 855**



Fig. 91 Cable no.12



Fig. 92 External mouse port

- Connect the PS2 plug (see Fig. 90) through the opening (feed the plug from the outside to the inside) to the rear panel of the PC.
- Attach it with 2 tapping screws (Fig. 91).
- Connect the PS2 plug to the "Secondary Pointing Device" plug-in-location on the mouse port adapter.

External mouse

- Connect the plug of the external mouse to the outlet in the rear panel of the PC.

Dongle

- Insert the dongle at the printer port and secure it with screws.

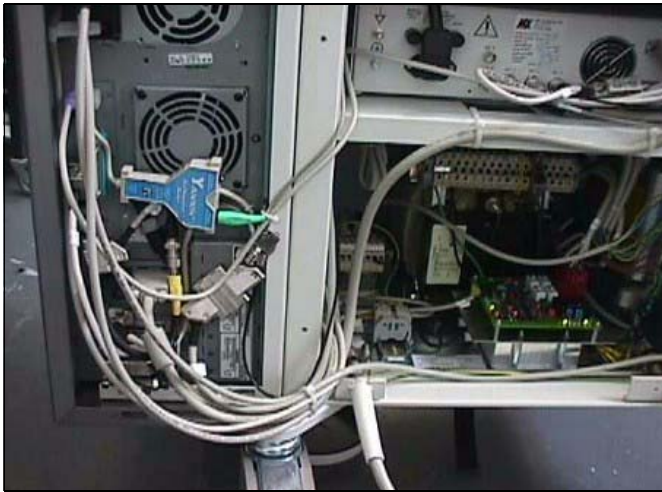
Cabling

Fig. 93 Cabling

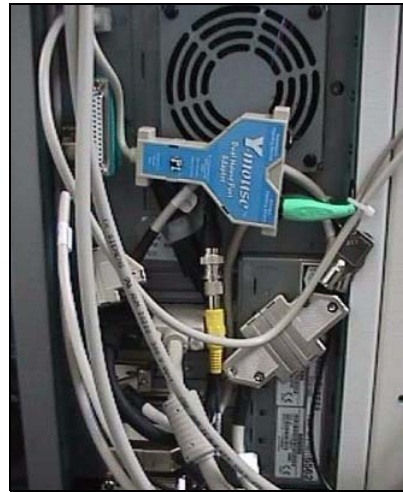


Fig. 94 Cabling

- Route the cables as shown in Fig. 92 and 93 and secure them with cable ties.

Covers



Fig. 95 PC with covers



Fig. 96 Grounding of PC housing

Attaching the PC covers

- Connect the protective conductor (1000 mm long) from the front cover of the base plate to the PC support (Fig. 95).
- Attach the front cover (Fig. 94).
- Connect the protective conductor (150 mm long) from the side cover of the base plate to the PC support.
- Connect the protective conductor (550 mm long) from the rear panel of the PC to the base plate of the PC support.
- Route the protective conductor from the base plate of the PC support to the protective conductor bar in the monitor trolley and connect it.
- Attach the rear panel of the monitor trolley.

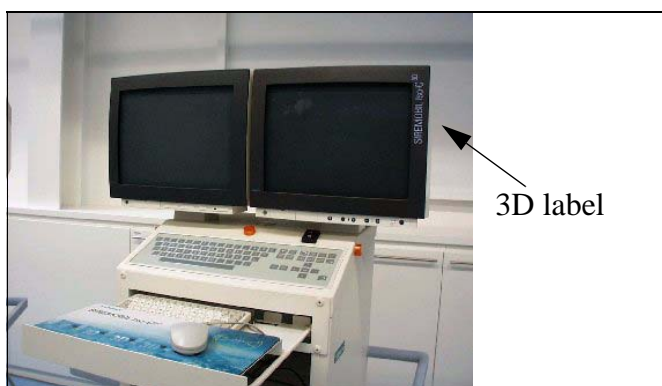


Fig. 97 3D label

- Affix the 3D label to the monitor (Fig. 96).

6 - 42 3. Part of activities independent of serial number



Fig. 98



Fig. 99

- Attach the large and small label for 3D reconstruction to the unit as shown in Fig. 97.
- Affix the safety label to the cover of the cable module as shown in Fig. 98. Also affix the second safety label to the cover of the cable module on the opposite side of the other label.

Checking the C-arm movements for SIREMOBIL Iso-C 3D

Proceed as follows after reconfiguring the basic unit and the monitor trolley.

- Connect the cables in the zipper hose to the basic unit.
- Connect the monitor trolley to the line voltage.
- Release the orbital brake.
- Move the C-arm by hand into both end positions. The movement has to correspond to the "normal" movement of a C-arm. If not, verify that connector M3.X1 for the brake assembly is inserted correctly. If yes, the LEDs in both keys light up.

Where to go from here

Continue with the SIREMOBIL Iso-C 3D Start-up Instructions SPR2-230.815.01... .

7 - 2 4. Part of activities independent of serial number

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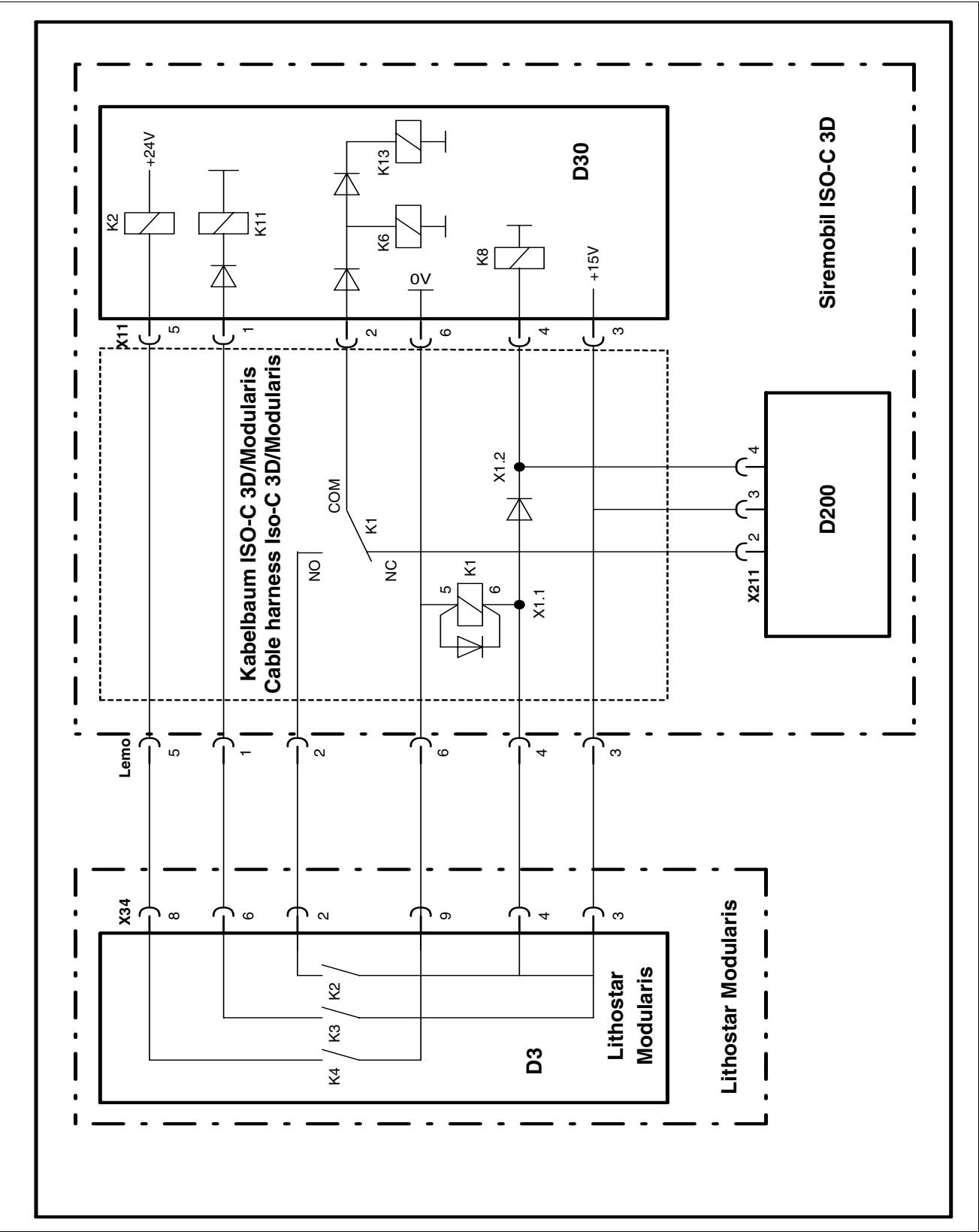


Fig. 1

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Chap. 0	Cover page, contents and rev. level newly generated
Chap. 6	TFT display installation expanded. Errors in PC display corrected. Numbering of figures updated.

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